



Master's thesis

Geography

Planning Geography

Marine Spatial Planning As Part of Transboundary Marine Regionalisation
-
Experiences From The Trilateral Wadden Sea Region

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<p>Ihmisen ja meren välinen vuorovaikutus on tiivistymässä ja muuttumassa monimutkaisemmaksi. Merialuesuunnittelu ja integroitu rannikkosuunnittelu ovat konsepteja, joilla järjestetään meritilan käyttöä kestäväällä tavalla. EU:n merialuesuunnitteludirektiivin myötä Eurooppalaiset rannikkovaltion on valtuutettu laatimaan yhteensopivat merialuesuunnitelmat vuoteen 2021 mennessä. Rajat ylittävää vuorovaikutusta tarvitaan, jotta merialueiden käyttö voidaan järjestää koherentisti. Samalla vuorovaikutus merten alueellisella tasolla luo uutta merten alueellistumista.</p> <p>Tämän tutkimuksen tarkoituksena on tutkia Vattimeren alueen muodostumista Tanskan, Saksan ja Hollannin yhteisenä meritilana, sekä arvioida alueellistumisen ja merialuesuunnittelun välisiä yhteyksiä.</p> <p>Rajat ylittävää sekä valtioiden sisällä tapahtuvaa Vattimeren meritilan rakentumista tutkitaan käymällä läpi asiakirjoja sisällönanalyysin avulla. Alueen merialuesuunnittelukehitykseen perehdytään tarkemmin seitsemän asiantuntijahaastattelun kautta.</p> <p>Tulokset osoittavat, että Vattimeri on monimutkaisesti rakentunut alue, jota luonnehtii monitasoinen hallinto. Vattimeri koostuu kolmenvälisen yhteistyön tuottamasta tilasta, joka pohjautuu erityisesti luonnonsuojeludiskurssiin. Suojeluaspektit ohjailevat muita alueella tapahtuvia toimintoja. Samanaikaisesti Vattimeren alueellistuminen näkyy myös valtioiden sisällä omina provinssien ja kuntien välisinä hallinnollisina järjestelyinä. Vattimeren alue tunnistetaan myös ulkopuolelta erityisesti alueen ekologisten arvojen vuoksi. EU:n direktiivit ja UNESCON maailmanperintökohdenimitys perustuvat niinikään suojeludiskurssiin ja ohjailevat Vattimeren alueellista rakentumista. Tutkimuksessa ilmenee, että Vattimeri ymmärretään myös merialuesuunnittelussa enimmäkseen ympäristönäkökulman kautta. Lisäksi alueen yhteiset arvot ja yhteinäinen ymmärrys alueen tulevaisuudesta ovat suunnittelijoiden mukaan toimineet harmonisoivana tekijänä eteläisen Pohjanmeren rajat ylittävässä suunnittelukeskustelussa.</p> <p>Tulosten valossa Vattimeri on kehittänyt trilateraalista yhteistyötä hyvin pitkälle, mutta verkoston tarjoamia mahdollisuuksia, kuten esimerkiksi aineistoja ja työkaluja, voisi potentiaalisesti hyödyntää entistäkin tehokkaammin merialuesuunnittelun tukena.</p>		
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<p>Land-sea interactions are intensifying and getting more complex. Marine spatial planning (MSP) and integrated coastal zone management (ICZM) are concepts for organising the use of marine space in a sustainable manner. Due to the EU Marine spatial planning directive the European coastal states are required to compile coherent MSP by 2021. Cross-border interactions are needed in order to organize sea management coherently. At the same time interactions on regional level create new regionalized marine spaces.</p> <p>The aim of this thesis is to study construction of the trilateral Wadden Sea region as a common marine space between Denmark, Germany and the Netherlands, and to explore the dialogue between the trilateral regionalisation and the MSP processes in the area.</p> <p>Transboundary and national construction of the Wadden Sea space are investigated by conducting content analysis to relevant policy documents. 7 experts were interviewed in order to gain deeper understanding of MSP processes taking place in the region.</p> <p>The results show that the Wadden Sea region is constructed in a complex manner and it is characterized by multi-layered regulation. Wadden Sea region consists of the trilateral cooperation, which relies strongly on nature protection discourse. At the same time the Wadden Sea regionalization can be recognized at the national scales as well, as the Wadden Sea provinces and municipalities have created their own cooperation structures. In addition, the Wadden Sea region is recognized by the external parties especially due to the ecological values. EU directives and the UNESCO World Heritage nomination are based on the nature protection discourse, and they direct the construction of the Wadden Sea region.</p> <p>Furthermore, the results show that the Wadden Sea is visible in the MSP processes mainly via its' physical, environmental understanding. Second, due to the mutual understanding of the ecological values, it the Wadden Sea is perceived as a harmonizing factor in cross-border MSP processes in the southern North Sea. In the light of results there would be more potential to utilize the trilateral Wadden Sea network more efficiently in MSP, but currently the countries prefer to e.g. use their national data.</p>			
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1. Introduction

“There are as many ways to see oceans as there are viewers”

Adalberto Vallega, (2002)

Due to global phenomena such as climate change, biodiversity loss and population growth, there are increasing pressures to seek new solutions how to utilize the seas in more efficient and sustainable ways. The potential of using marine space and resources for e.g. energy production, food production, transportation and recreation, while ensuring the use is on sustainable level is being promoted and supported around the globe by blue growth initiatives (European Commission, 2017; FAO, 2014). Allocation of activities such as fishing, aquaculture, wind energy, extraction of minerals, cables and pipelines, maritime traffic, tourism and recreation are activities that take place in the marine setting, and while consisting of physical objects they include the social aspect of human relationships. Intensifying relationship between human and seas brings the marine space closer to the society and opens for new ways to perceive marine space (Jay, 2012). Instead of understanding sea through its physical dimensions and nature characteristics, it becomes clearer that marine spaces are increasingly constructed through social relations.

As the number of the actors at sea is increasing, spatial claims for activities are more likely going to overlap, and the risk of conflicting situations is increasing. Sustainable use of the marine resources and marine space demands integrative management of the competing economic, social and environmental needs (Gilliland & Laffoley, 2008). Management of marine space and resources has traditionally been characterized by sectoral approach, management of each activity separately, which can lead to fragmentation and mismatches in marine governance (e.g. Douvère & Ehler, 2009; Douvère 2008). More integrative ways to manage marine space are gaining attention. Instead of sectoral approach, more holistic approaches concentrate on a specific area, such as spatial patterns of activities or ecosystems. As a consequence, territorial and political perspectives often need redefining, which with other words lead to regionalisation of marine space (Soma et al., 2015). Shift in the spatial scope of governance and management produces new, regionalized spaces.

Widely recognized tools for place-based marine management are marine spatial planning (MSP) (Douvère et al., 2007) and integrated coastal zone management (ICZM). The aim of these approaches is similar to land use planning: to fit different activities and interests together, prevent the conflict situations and bring the participants together (Gilliland & Laffoley, 2008). However, planning in marine space differs from land-use planning by e.g. the constantly changing 3-dimensional marine

environment, availability of data and differences in legislation and administrative areas (Kidd & Ellis, 2012). In addition, unlike on land, at sea the planning tradition is relatively new since MSP practices are still being adapted. This raises the question how does MSP relate with the spatial planning tradition and how do marine spatial planners approach the marine space?

Over the past few years, more and more coastal states have compiled MSPs and ICZM strategies for their territorial waters, and even more states are completing studies, and running pilot projects. In Europe, these developments have widely been supported by the Maritime Spatial Planning act by the EU (2014/89/EU) that requires all the member states to compile MSPs in their waters and them to be coherent with the neighbouring countries. Nevertheless, cooperation and coordination between neighbouring states has been quite marginal despite the need for it (Jay et al., 2016; Kidd & McGowan, 2013). In the long run it is not enough that the countries plan their marine areas individually because the seas rarely encompass territorial waters belonging to only one state (Kidd & McGowan, 2013). Most likely activities have impact on the other side of the border as well. The need for cross-border cooperation in sea management is emerging. Nonetheless, transboundary governance and planning across the borders are not simple tasks, not even in the terrestrial setting. Even in today's globalized world, where national borders tend to become more invisible, the differences between the national legislations and planning traditions slow down the cooperation (Knippschild, 2010). Also lack of interest towards cross border issues is often an issue (Perkmann, 2008). In marine space the problems are similar, with the additional challenge of very dynamic 3D environment, and the lack of long planning traditions. Van Tatenhove (2017) argues that there is conceptual and institutional fragmentation related to transboundary MSP. With conceptual fragmentation he refers to the different approaches of blue economy based MSP and ecosystem based MSP, while institutional fragmentation refers to the differences in the planning tradition and institutions.

In this study I examine transboundary regionalisation of the trilateral Wadden Sea and how the recent MSP developments are related to it. The Wadden Sea is located in the North Sea and is a trilateral marine region stretching along the Danish, German and the Dutch coasts. The marine area is not only part of three countries, but there is a number of competing and sometimes contrasting activities: the Wadden Sea is located in the heart of important maritime activities, while at the same time it is internationally acknowledged vulnerable tidal ecosystem.

1.1 Research questions and the aim of the study

A lot of sea-related research has been compiled by individual fields of study, such as sociology and politics, but there is a need for more multi-sectoral approach, for example in sea use management and regional geography (Smith, 2004). Against this background, the aim of this study is to investigate the trilateral Wadden Sea as one region from more holistic perspective. Second, I examine the dynamics and challenges that are projected on this in the recent Maritime Spatial Planning processes.

I set out the following research questions:

- 1) How is the Wadden Sea constructed as marine region?
 - How does the trilateral cooperation produce transboundary marine region? (trilateral aspect)
 - What is the relationship between trilateral and national perspectives of the Wadden Sea governance? (national aspect)
 - How is the Wadden Sea region acknowledged by international systems? (external aspect)
- 2) How is the Wadden Sea regionalisation projected in MSP developments of Denmark, Germany and the Netherlands?
 - What is the relationship between the national MSP strategies and the trilateral strategy?
 - How does the Wadden Sea cooperation affect the national MSP processes?
 - What kind of challenges does the Wadden Sea reflect in the MSP processes in the area?

With the first research question my aim is to point out that Wadden Sea is a transboundary region produced on trilateral, national and international scale. The idea is to find out, how the trilateral cooperation system works and how do the national marine strategies of Denmark, Germany and Netherlands link in the process of marine regionalization, and moreover, what is the role of the Wadden Sea cooperation in this. With the second research question I examine how MSP developments are situated in this region building process.

The main conceptual framework used for analysing the regionalization process in the research area is the marine governance framework by Soma et al. (2015). The concept suggests that marine regionalisation and eco-system based management are the building blocks of marine governance. Moreover, marine regionalisation is presented as consisting of cooperation, integration and principles

of good governance. The framework is introduced more in detail on page 26. In this research I view the research area through the concept of regionalisation and hence I concentrate on the aspects of cooperation, integration and the principles of good governance.

I use two main methods to answer the research questions: content analysis and semi-structured interviews. Content analysis is conducted to policy documents and other written materials on the trilateral Wadden Sea cooperation and the national marine governance and MSP materials of Denmark, the Netherlands and Germany. Semi-structured interviews were undertaken to gain a deeper insight on MSP experiences in the research area.

1.2 Research area: the Wadden Sea



Figure 1 The Wadden Sea is situated in the south east North Sea. It is stretching along the Dutch, German and Danish coast. Cooperation area comprises the tidal area, the barrier islands, parts of the Danish, Dutch and German territorial seas and estuaries of the rivers Ems, Elbe and Weser (CWSS, 2016).

The Wadden Sea is located in the southern North Sea, stretching from Den Helder in the Netherlands to Varde in Denmark. It is an interesting area to study marine regionalisation due to the manifold and partly contradictory discourses taking place in the area and creating there marine space. The Wadden Sea has been described as one of the pioneering examples on transboundary cooperation in MSP (Douve, 2007; Kidd & McGowan, 2013). Wadden Sea is a vulnerable and unique marine ecosystem, which on the other hand is located in a very busy intersection of human activities, such as

large harbours, energy production and tourism. It is located in the southern North Sea where the challenge of MSP is palpable: on the other hand, MSP aims at efficient and safe allocation of activities, economic growth by different blue growth strategies, while ecological sustainability and nature protection are being underlined by ecosystem-based planning. Against this background, the Wadden Sea provides a fascinating research area by multitude of pressures and transboundary connections. The coastal states Denmark, Germany and the Netherlands have worked together for decades to pursue common environmental and socio-economic sustainability goals. The scope of the trilateral cooperation, extending to exclusive economic zones (EEZ) of Germany, Denmark and the Netherlands (Enemark, 2005). As the cooperation started it was noticed that protection and management of the ecologically vulnerable area is only possible if it is implemented as transboundary ecosystem-based management (Enemark, 2005). Since start of the cooperation in 1970s, the system has developed into a complicated multilevel institution, including also the MSP issues under the trilateral ICZM strategy (WSF, 2013).

Nature protection is the widely defining discourse of the Wadden Sea area on local, regional and even global scale. The Wadden Sea has been stated as an ecologically remarkable area even on the global scale: it is the largest unbroken tidal mud flat area on earth (CWSS, 2016). The landscape is characterized by mud flats, sand dunes, salt marshes and islands, each of them offering special living environment for different species (Enemark, 2005). The organisms have adapted to challenging living environment of the daily changes of low tide and high tide. It is home for diverse species of i.e. marine mammals, fish and invertebrates, and it also serves as an important resting point for migratory birds. Due to its unique ecological values, the Wadden Sea area has been protected under the national and international regulations. Denmark, Germany and the Netherlands have established national parks in the Wadden Sea. More than one third of the Wadden Sea belongs to the Natura-2000 network and most of the Wadden Sea is part of the Ramsar Convention, the international wetland convention run by the United Nations. The Wadden Sea was added to the UNESCO World Heritage in 2009. All these national and international recognitions produce the Wadden Sea as a space and hence they are important parts of the Wadden Sea regionalisation.

South east North Sea is an important hub for maritime traffic as even in the global scale important harbours and shipping routes are situated there (OSPAR, 2010). Maritime traffic to Wilhelmshaven, Hamburg, Bremerhaven and Esbjerg, as well as through the Kiel Canal is very frequent. All types of vessels from recreational boats to large cargo ships use the main shipping lane in the Wadden Sea area, and smaller shipping lanes cross the Wadden Sea to reach harbours. However, the demanding conditions in the area require attention: the water in the Wadden Sea is quite shallow, there are strong

currents, the sandbanks and fairways are constantly changing their location and the tides regulate the conditions daily. It is often stormy, and the weather might change rapidly. An accident in or close by the sensitive ecosystem would have catastrophic consequences, although so far bigger accidents have been avoided. International Maritime Organization (IMO) (2010; 2002) has stated the Wadden Sea as a particularly sensitive sea area (PSSA), which has led to shipping regulations and recommendations in the area. Threats that marine traffic poses to the Wadden Sea are mostly related to pollution, such as noise pollution and chemicals. Moreover, oil and other hazardous substances can end up in the sea by accident or by illegal dumping. Frequent shipping activities nearby and across the Wadden Sea bring the area connects it closer to the central Europe, but on the other hand the activities are regulated by vulnerability of the nature, and hence the regional understanding derives back to the nature protection discourse.

Contrasting understanding of Wadden Sea space is also related with nature sources. The North Sea is an important source of nature resources, for example for fishing and energy production as well as for oil and gas extraction (Kannen, 2014). Especially fishing is a traditional means of livelihood in the Wadden Sea area, although at the same time intensive commercial fishing projects a threat for the ecosystem (Lotze, 2007). To protect the area from overfishing, regulations and fishing zones are in a central role. For example, net fishing is forbidden in most of the Wadden Sea, but it does not prevent fishing right next to the Wadden Sea. Shrimp fishery is allowed in the Dutch and German Wadden Sea except in the zero-use zones, and in Denmark it is only allowed in the offshore side of the Wadden Sea. Mechanical cockle fishery is prohibited in most parts of the nature conservation area.

The Wadden Sea is a popular tourism destination, especially for the visitors from Denmark, Germany and the Netherlands. Tens of millions of annual visitors have a great impact in the economy of the area. Recreational activities, such as boating and wind surfing, require space in the tidal flats, beaches and waters. Mudflat-walking mainly takes place on defined routes under guidance. Beaches are mainly located on the North Sea side of the islands. Again, tourism too is an important topic defining the Wadden Sea region especially from the economic point of view, while the recreational activities are being regulated with the nature protection point of view. Nominations such as the National parks and the UNESCO World Heritage Site support producing the region from the recreational and tourism point of view. They also enable raising awareness of the Wadden Sea on a larger scale.

Lastly, military activities need also to be considered in the management of the Wadden Sea. They are limited in time but affect especially the breeding and moulting seasons of different species. There are a few exercise areas for ground forces and aircraft, i.e. shooting and testing of equipment, low altitude flights and other activities (Marencic & Nehring, 2009). Most of the activities are concentrated in the

western edge of the area in the Netherlands, such as Vliehors and Mokbai. In Germany exercise areas are situated in Meldorfer Bucht, in Denmark on the island of Romo and Hobay, Skallingen and Oksbol. However, in most of these areas the activities are taking place on a few days per a year or even more rarely. Since 1990s the military activities in the area have clearly declined and some military areas have been abandoned. There are also some historical dumping sites of ammunition and impacts of these cannot be foreseen yet.

1.3 Structure of the study

In the first three chapters I present the theoretical background of this thesis. In Chapter 2, I will approach seas from social perspective by describing the relationship between human and sea, by viewing different spatial theories and regionalisation and how they can be related to the marine context.

In Chapter 3, I describe marine governance and present the marine governance framework (Soma et al., 2015) that is the main theoretical framework in this thesis.

In Chapter 4, I concentrate on marine spatial planning (MSP) and integrated coastal zone management (ICZM) as tools of marine governance and spatial management of seas. I compare their differences with urban planning and relate them with the planning theory. Moreover, I view MSP in the cross-border context, as within the dynamic marine space it is important to cooperate across borders.

Methods and materials of this research are presented in Chapter 5. I describe the process of compiling my literature analysis and semi-structured interviews.

The results are presented in two parts. Chapter 6 concentrates on the Wadden Sea as a relational sea region by presenting the results of literature analysis. The aim of chapter 6 is to form an image of the regionalisation processes in the research area: how is the trilateral region constructed, how does the national context relate to the trilateral context and what is the role of external institutions and policies? In Chapter 7 I view the Wadden Sea as a space of planning. I compare the national MSP processes and the trilateral MSP goals by literature analysis and semi-structured interviews.

The results are discussed and related with previous research in Chapter 9. Furthermore, the results and used methods are reviewed critically.

Chapter 10 concludes the results, answers to the research questions and suggest future research topics.

2. Spatiality of seas

My attempt in this thesis is to investigate marine regionalisation in the Wadden Sea and to examine marine spatial planning as an approach to create and organize marine space and marine regions. Before doing so, it is important to understand concepts of space and region and especially by translating them in the marine setting. This chapter reviews the seas from different spatial perspectives and draws a background for how the marine space is constructed. First section summarizes the historical evolution of human-sea relation in terms of spatial perceptions, the second section introduces the human geographical space concepts from the marine perspective. Thirdly, the relational space concept is taken into a closer examination in terms of regionalization processes.

2.1 Social dimensions of seas – historical evolution

Relationship between human and sea is often presented through *dichotomies* in literature (e.g. Steinberg 2001; Grzechnik & Hurskainen 2015; Linder 1996). These contrasting perceptions usually refer to sea as a barrier and connection, sea as threat and resource provider, space of freedom and enclosure or as specific feelings e.g. fear and amusement. The perceptions and relationship between human and sea have changed over time, according to technological developments and social constructions characterizing each era in human history. Development of technology has enabled human to utilize sea space and marine resources more efficiently and securely. All these developments have shaped understanding of marine space and consequently produced marine space. In this section, I shortly summarize the main points of historical evolution of the human-sea relationship, and also the understanding of the Wadden Sea.

Early records of the relationship between human and seas mainly refer to sea as space for trade routes and sea as uncontrollable and fearful space (Steinberg, 2001: p. 45; Linder, 1996: p.15). Mythologies and religious writings, e.g. Greek mythology, Hindu writings and Mesopotamian writings describe how gods bring precious gifts such as seafood when they are favourable, but at the same time there was the aspect of respect and fear towards the unpredictable powers of seas. The sea was perceived as an unpredictable threat to the coastal settlements and people who tried to pass it (Linder, 1996: p. 15). Still, water ways were the most important connections for trading. While it was seen impossible to control seas or to understand them as territories as such, the social aspects were projected onboard of ships and in harbours. People were travelling across the seas, and accordingly they were perceived

as surfaces that needed to be crossed, but the sea itself was seen as a non-territory without a social dimension. In literature the Mediterranean Sea has been described as one of the first marine territories, *Mare Nostrum* (e.g. Rickmann, 1996). Rickmann presents that the Mediterranean was described as an inner sea of the Roman empire, and therefore it could be claimed as one of the first marine territories. However, Steinberg (2001) argues against this perception (pp. 64-66). Instead, he clarifies that Mediterranean was claimed as a space of the Romans' influence, a sort of force field of the Roman Empire, but it was never an actual territory.

The early story of the Wadden Sea and human is similar. The first human users of the Wadden Sea were hunter-gatherers, early farmers and early settlers, and their use of the nature resources in the area was quite extensive (Lotze et al, 2005). Once the agriculture techniques developed and more stable settlements were required, human started altering the landscape in the area intensively by utilizing the fruitful soil of the salt marshes for agriculture and by extracting peat for salt (Enemark, 2005: p. 998). The inhabitants needed to adapt to the extreme living conditions by the North Sea by building their settlements on small hills, terps (Bazelmans et al, 2012), and later by building dykes against the violent sea (Enemark, 2005: p. 998). The presence of the sea was threatening.

Mercantilist or merchant capitalist era was characterized by the shift towards more evolved technologies and modern society in Europe (Steinberg, 2001: p. 68). Typical for the mercantilist era was to maximize export and minimize import by expansion to overseas territories and import of valuable metals. Oversea territories, maritime routes and harbours constructed networks of channelled circulation across the seas, and to control each part of the network, power was possessed by national policies and military (p. 73). However, as Steinberg points out, seas as such were not perceived as territories or social spaces, but the social of the seas rather meant power field and control over the trade. Regarding to the Wadden Sea, the Netherlands were one of the core areas of all maritime activities, and along with the North Sea coast the Wadden Sea area was involved in the world trade (Knottnerus, 1999).

The mercantilist era laid ground for the industrial capitalism and the transition started around 18th century (Steinberg, 2001: p.110). In the Wadden Sea area development of machines enabled to enlarge the dike and dam constructions (Bazelmans et al., 2012). Characterizing for the industrial capitalist era was profit making and increasing the value of land by making investments at certain locations e.g. by building factories (productions sites) and developing infrastructure. Seas were not environments for making fixed investments or constructions. As Steinberg concludes, seas were perceived as worthless spaces from the capitalistic perspective and as a result they were left outside of the society – although at the same time marine resources were used intensively. Seas were defined

as *the great void* or *antithesis of land-space*, empty transportation surfaces between the nations (p.113). However, perceptions of coastal seas differed from the deep seas and were developed more territory-like (p. 135). Coastal zone was more visibly controllable from land, i.e. by canon range. Nevertheless, coastal zone was treated placeless and due to e.g. the challenging weather conditions and threat of flooding, the coastal areas were perceived as threatening and remained mostly unsettled. Coastal zone remained as part of the great void until the enlightenment period, and ideas such as taking control over the nature and development of technology slowly shifted the ideas of coastal seas to become territorial waters. At the same time, new governance systems and regulations were needed to prevent over-exploitation of marine resources. As a result of decades of negotiations, the United Nations Convention of the Law of the Sea (UNCLOS) was signed in 1982 and dimensions of each marine zones were set. Seas became directly part of nations territory.

Due to urbanisation, inhabitants started flowing to the cities from the North Sea coast (Knottnerus, 1999). Until the second half of the 20th century, the Wadden Sea was still perceived as an economically lagging area, by all of the Wadden Sea countries, and there was a will to develop the area. There were ideas and discussions to make full advantage of the agricultural and industrial opportunities in the area by constructing larger dykes that would gain more land from the sea. The storm floods stroke the area badly in 1950s and 60s, which was another reason to build more protection against the threatening sea. The dyke would have bordered some parts of the Wadden Sea creating more land and on the other hand eliminating parts of the sea. The plans included constructing nuclear plants that were supposed to attract more industry in the area. To draw conclusion on these plans, at that time the Wadden Sea was mainly perceived with no value as such: the Wadden Sea was mostly seen as a part of the threatening sea, or as periphery that, against the ideals of industrial capitalism, was not producing enough.

In the post-modern era perceptions and processes created by capitalism intensified. Efficiency, mass production, mobilizability of labour and commodities describe the era (Steinberg, 2001: p.159). For seas this meant that on one hand sea was increasingly perceived as a transportation surface, where commodities and labour could easily be transported to the other side of the world. Especially containerization made transportation more efficient by standardized transportation units. On the other hand, seas were started to be seen as potential spaces for fixed investments (Steinberg, 2001: p.188). As the uses intensified, the potential for conflicts became clearer, which demanded more attention for management.

Towards the present day the world is consuming more and faster and hence the circulation of labour and commodities around the world is intensifying as well. More resources are needed to fulfil the

needs of the growing and middle-classifying population. Therefore there is the need to use the potential of seas more intensively as well. The diverse uses, such as recreation, energy production, extraction of nature resources and shipping potentially bring human closer to the sea. At the same time these different human aspects interact with each other creating more complex and abstract social marine spaces. Hence, more abstract spatial understanding is needed in order to govern and organize marine spaces and activities. In the next section I concentrate on perceiving marine space through social relations.

2.2 Spatial concepts and sea

In human geography *space* is a central concept and it has usually been contextualized through its' physical, relative or relational dimensions. These concepts have shaped the ways e.g. how urban and spatial planners approach the space that is being planned. In this section I review commonly used spatial concepts in geography and compare them with the marine context.

In the marine setting the tradition of spatial research is shorter than on land territories, but many sources suggest that especially the strong role of sea-related nature sciences has led to dominance of understanding the sea mainly as a natural space (Jay, 2012). For a long time, the dominating spatial approach in geography was physical as well. This absolute, Euclidean understanding of space relies strongly on the positivist epistemology, and states that space exists independently as it is, regardless of any other factors (Lefebvre 1974; Häkli, 1999; Harvey, 1975). The assumption of absolute space is that it can be observed and measured, arranged and located (Jay, 2012). Physical dimensions and locations of objects, such as buildings and cities have widely been used as background for understanding and making sense of the terrestrial space. In marine space such objects could be locations of wind farms, cables, oil platforms or specific marine environment.

As referred in the previous section, since the industrial capitalist era seas have been illustrated as empty, plain surfaces on maps. For example, whenever one opens Google Maps or similar, the blue color illustrating seas supports the perception of sea as a great void, and delivers us the message that seas are separated from our land-based societies and normal landlubbers don't have a need for more information of sea space. However, our lives interact with seas constantly without us even noticing it: goods are transported around the world, off-shore energy is produced to fulfil our electricity needs and cables in the sea bottom enable transferring information traffic (Smith, 2000). These intensifying and overlapping uses all include social aspects that are projected in the sea space. Furthermore, they interact with each other creating more abstract social spaces.

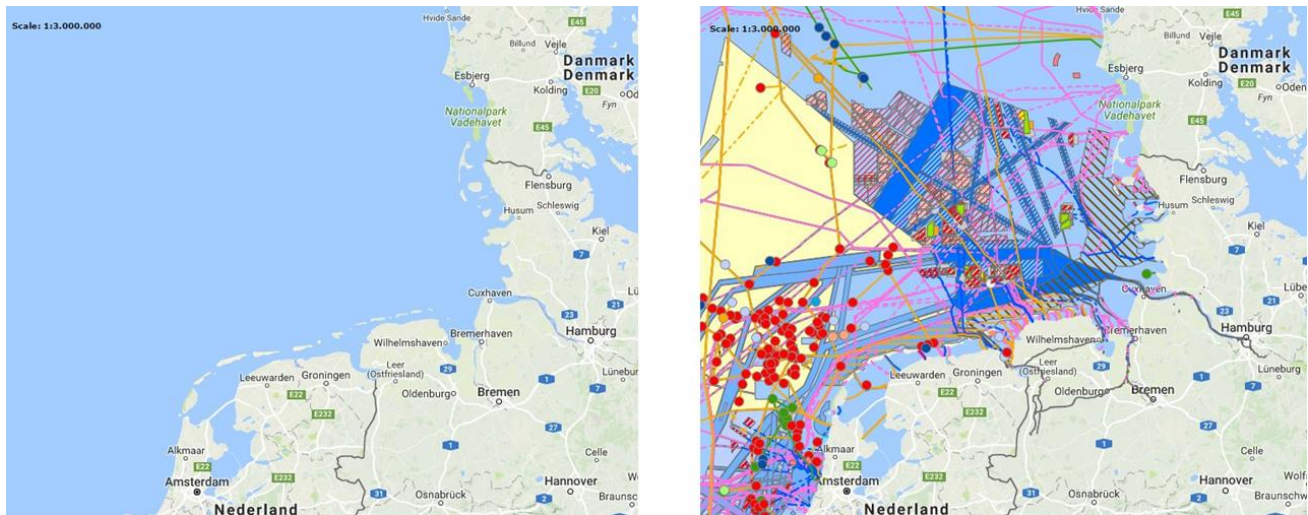


Figure 2 Marine space is often perceived as something outside of the society, which is supported by the maps that illustrate seas as empty blue areas. In reality seas are spaces where numerous human activities co-exist and indirectly or directly have impact on our everyday lives (WSF 2017)

The absolute space model was revolutionized by the idea of relative space that understands the space through models of human actions (Häkli 1999: p. 51). Instead of definite locations the approach assumes that space is constructed by the phenomena, the spatial patterns formed by objects and people, and that these patterns were mostly understood as homogenous layers (Häkli 1999: p. 54). Relative space could be measured and categorized by e.g. cost or time distances, accessibility or as separating factor (Morill, 1970). Reflecting these thoughts with the marine space, it's clear that during different history eras and even today, marine space has often been approached as a transportation surface that can be described e.g. as cost or time distance of marine traffic. Instead of as a connecting surface sea has been also viewed as a separating factor, something that divides the land masses, something that needs to be crossed. Furthermore, the assumption of seas as a plain, homogenous surfaces fits in the discussion on relative marine space.

Paradigm change from positivist approach to humanistic and structuralist approaches generated the idea of human as an active observer and experiencer, instead of being an object of the processes in the space (Häkli, 1999: p. 82). It was noticed that mapping and measuring don't characterize all dimensions of space: space has also more abstract, social dimensions. Häkli (1999: p. 82) defines spaces as social and inseparable from the society, not just material construction or dimension. Lefebvre's *Production of space* tries to create a link between the material space and the social, discursive space (Lefebvre, 1974). This interaction Lefebvre defines with the word spatialization. According to Lefebvre, spaces exist only because they are constructed through relationships, feelings and experiences. If space is constructed through this kind of interrelations, it means that there is not just one way how the space is constructed: according to this thought, the identity of the space depends

on the viewer and leads to multiple layers of one certain space – spaces of plurality. In the marine setting this means that space is a result of actions and interactions of different actors.

This thought of not taking spaces as given, as solid surfaces nor constructions of physical objects leads to Massey's (2005) idea of spaces being unfinished and under the constant process of change and construction. She suggests that time can't be separated from the space: time is always affecting the space, "space is always in the process of making, never finished or closed" (Massey, 2005). For example, as presented in the previous section, each era in the human history has shaped the ways how the sea space have been approached and utilized and what has been their role in the society – and the other way around, the seas have had a remarkable impact on how the society develops by offering e.g. trading routes and resources. There is a continuous dialogue between marine space and society.

2.3 Regional development of seas

Along with space, region is a central concept used e.g. in human geography, governance and spatial planning. In this section I introduce the concept of region and how on the other hand regions can be produced through social relations, governance processes or discourses taking place in a specific area. From the Wadden Sea point of view this process is essential to understand, because the region is produced by overlapping relations.

As the understanding of space, there have been within the history of geography different phases and different understandings of *region*. In the positivist era, areas and regions were often approached as spatial categories classified by certain physical factors within the area, for example vegetation or geomorphology. Regarding to the seas, this has been the case quite long, as the seas have been approached as a space of nature scientists (Jay, 2012). As the paradigm shifted towards more abstract and social spatial understandings, also regions were described in relational way. According to Benz et al., (1999) *region* refers to *space* constructed through social structures and functions. Similarly, Häkli (1999: p. 23) describes region as a delimited space which is constructed through the social and natural phenomena that have connection to the spatiality. According to critical approaches, regions are social constructs and they can be viewed as processes. Allen et al. underline that related to regions 1) relational understanding of space and place is needed, and 2) regions don't exist on their own, they are being constructed. As social relations form regions, the regions also formulate the relationships. Paasi refers to three-fold categorization to pre-scientific, discipline centred and critical ideas of region (1996). Pre-scientific definition of region refers to a given spatial unit, such as statistical area that is

used for practical purposes “as given”. Paasi continues, the discipline-centred understanding of region refers to them as “objects or results of the research process”.

Regionalization can be understood as a process in which the aim is to decentralize the decision making and bring it to the regional level and to promote cooperation, regional matters and competitiveness (Benz et al., 1999). It’s about redefinition of territorial spaces but also redefinition of governance settings. It’s a process of spatial ordering and organizing of activities of specific governance arrangements (Benz et al., 1999). This process is often referred as “new regionalisation”, and the idea is to connect networks of official and non-official actors. Vallega suggests that marine regionalisation can occur when a part of a sea is put under forces that create regions (Vallega, 2002). Vallega states that *ocean area* is space that is not benefiting the organizational structures of human actions. Human is present and making use of the resources, but these areas are not part of social constructions; there is spatial differentiation but no cohesion. *Ocean regions* on the other hand are subject to clear objectives in resource management, as well as environmental and economic development. The patterns of human interaction with the ecosystem, political approach and organizational framework are more complex and aim at cooperation and integration (Vallega, 2002). In marine setting the redefinition of territorial spaces refers to recognizing the borders of marine ecosystems and the spatial patterns of marine activities, instead of operating at the existing administrative and political levels (Soma et al. 2015; van Tatenhove et al., 2015). Regionalisation of seas means integration and cooperation of maritime activities, policies and actors at the level of regional seas. Regionalisation processes are essential when searching solutions to the marine management with place-based approaches.

An example of human interactions creating and shaping regions is the notion of the parts of the seas that are affected by human interactions more intensively than the other parts: so called core-periphery model. Not all marine areas are equal when it comes to their location in relation to human or the possibilities they offer. Some areas lie closer to dense population centers and therefore also seas close by are affected by more intensive use by human. There are marine areas with richer nature resources than other areas, and this also defines how much interaction there is between human and sea.

Smith framed a typology for the sea areas around Scotland (1984), by classifying them into *wilderness*, *rural* and *urban seas* based on their location and interactions with human. ESPON-research programme (European Observation Network for Territorial Development and Cohesion) ESaTDOR expanded Smith’s tripartite typology into five classes; wilderness, rural areas, transition areas, regional hubs and European core areas. The purpose was to create information that could help in decision making and the management of the European sea regions (ESPON 2011). At the same

time marine regions are produced with scientific information. According to Jansen & al. (2013) the idea behind categorizing the marine areas is to specify different types of sea areas based on their land-based and sea-based activities and pressures, as well as land-sea interactions that describe the relationship between maritime region, its adjacent coast and the inland areas". The classification can be carried out for instance by measuring flows (e.g. traffic, cables, pipelines), economic significance (e.g. ports and their locations, connections with the mainland, extraction natural resources) and environmental pressures (e.g. human-use related and natural risks) (ESPON 2011; Jansen & al. 2013). If we look at this categorization proposed by the researchers of EPSON, the core area of the European seas is located in the southern North Sea, part of which the Wadden Sea also is. There the strategic economic importance of the sea is significant, the interactions between the land and the sea are very intense and the international connectivity with the hinterland is good. The regional hubs, such as the coasts of the UK and the Gulf of Finland comprehend the second highest level of interactions between the land and the sea. Employment on the maritime branch is high and the economic importance of the region is important. There are important national-level connections but also some international connections. Rural and wilderness areas have the least connections and interactions with human, while also the level of environmental pressures associated with human activities stay low. Spatial classification of sea areas is still in its infancy, but the benefits for example for marine spatial planning have been recognized (Jansen & al. 2013).

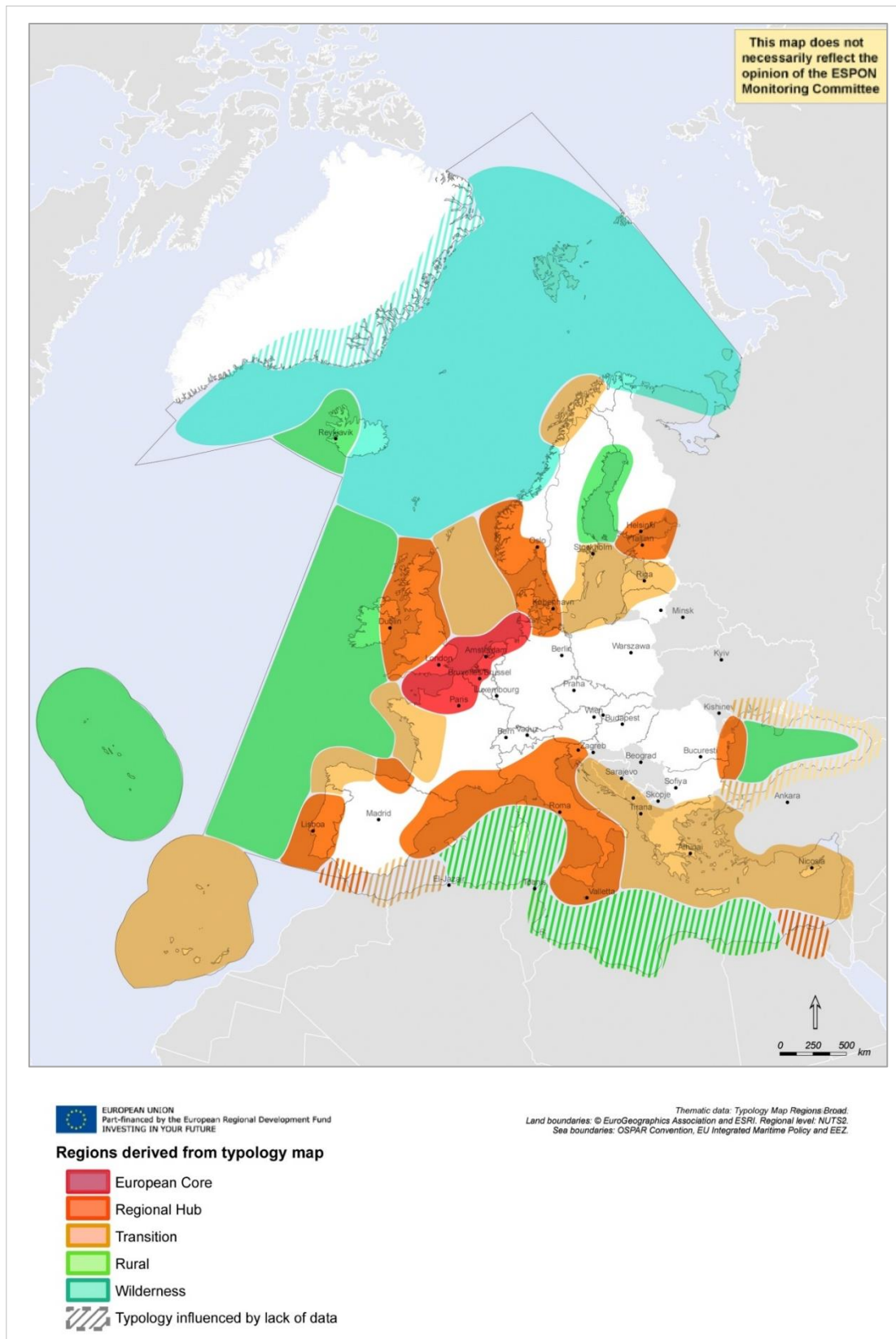


Figure 3 Typology of the European seas. As terrestrial space, also marine space can be classified according to intensity of the human-sea interactions. In the ESPON-research programm the European seas were defined in five classes. European core areas and regional hubs (red and orange) refer to the central locations of human activities, while rural and wilderness areas (green and blue) can be described as peripheral marine areas (ESPON, 2011).

2.5 Territorialisation of seas

If space is relational, relying on the human interactions, it inevitably means that power relations occur. It can't be avoided that space gets political. David Storey (2001) defines territory as "division of earth's surface into political-territorial units", mostly claimed by a country. He continues that territories can occur at different scales from micro to macro scales. With seas there is a long history of dichotomy of perspectives when it comes to freedom and enclosure, *Mare liberum* and *Mare clausum* (Steinberg, 2001).

Defining state borders at sea is not always as simple as on land: they are literally lines drawn in the water. Still, there are existing borders that attach marine spaces to the territories to states. States have claimed marine space and attached territorial seas in their territories (Steinberg, 2001: p. 137). As a result, marine spaces are generated through national law, or as a result of international maritime law. The background of maritime territories is formed by the United Nations Convention on the Law of the Sea (UNCLOS), which classifies the marine zone attached to each sovereign state. Moreover, UNCLOS defines the legal base of duties and rights in the sea use, exploitation, allocating the activities and protection of the marine environment (UNCLOS 1982). The agreement was commonly accepted in 1982 and it came into force in 1994. It has been signed by 167 countries and the European Union. Although UNCLOS defines the general guidelines to each state how the boundaries of each maritime zones is being defined, it's up to the state how these zones are being governed and managed. However, UNCLOS is not a legally binding document.

Allocation of activities in the marine space is based on the maritime areas to which coastal states have sovereign rights. UNCLOS classifies the following maritime zones: a) *internal waters*, b) *archipelagic waters*, c) *territorial seas*, d) *contiguous zones*, e) *continental shelves*, f) *exclusive economic zones*, g) *high seas* and h) *enclosed or semi enclosed seas* (Figure 2). Each maritime zone is measured from the *baseline* of the coastal state. Normal baseline is the natural, officially recognized baseline, but exceptions can be made if the coastline is deeply intended, unstable or islands lie in the immediate vicinity of the coast (UNCLOS Article 5, Article 7).

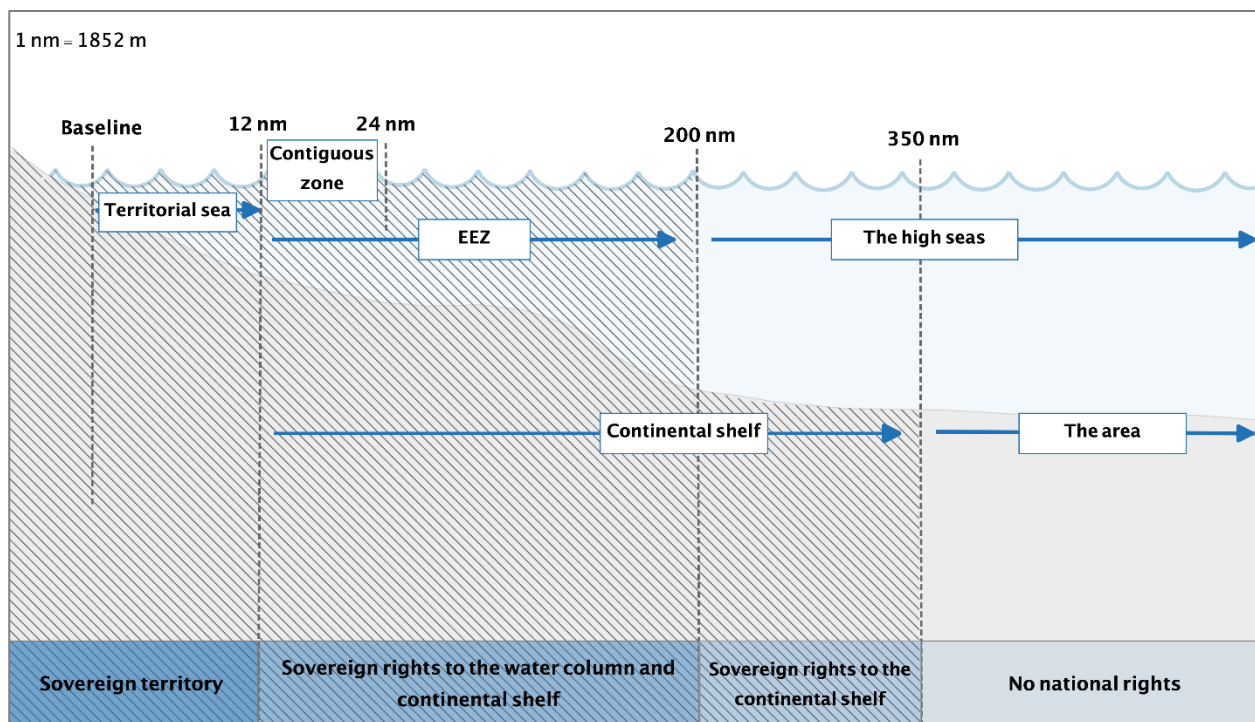


Figure 4 The maritime zones defined in UNCLOS. The zones are defined from the baseline of each coastal state. The following zones are defined in UNCLOS: internal waters, archipelagic waters, territorial seas, contiguous zones, continental shelves, exclusive economic zones, high seas and enclosed or semi enclosed seas. In the figure the hashed lines represent to which areas the coastal state has sovereign rights.

The coastal state has full jurisdiction in internal waters and territorial seas. By internal waters is meant the zone on the landward side of the baseline and it includes estuaries, single state bays, coastal harbours and waters enclosed by straight baselines (Article 8). *Territorial seas* lie outside of the internal waters, extending maximum 12 nautical miles (22,2 km) from the baseline of a coastal state.

Outside of the territorial waters coastal states border on *continental shelf*. Continental shelf extends up to 200 nautical miles from the baseline and it comprises the subsoil of the submarine areas and the seabed (UNCLOS: Article 76). In the continental shelf the coastal state has sovereignty over exploring and exploiting the non-living resources in the sea-bed and subsoil. Contiguous zone starts from the outer edge of the territorial sea and extends up to 24 nm from the baseline. Together with internal waters, territorial sea and continental shelf form *exclusive economic zone* (EEZ) that expands up to 200 nautical miles from the baseline (Article 57). Coastal state has special rights over its EEZ. The state has the right to conserve, manage, explore, exploit and research all the natural resources, in the seabed and its subsoil as well as the waters above the seabed (Maes, 2008). Nevertheless, the coastal state needs to take into consideration the other international regulations, such as the International Maritime Organization, when carrying out these activities.

High seas are sea areas outside of the exclusive economic zone, territorial sea or internal waters, or archipelagic waters of an archipelagic state (article 86). High seas are also known as *international*

waters or transboundary waters. According to the freedom of the high seas (Article 87) all states are under conditions allowed to e.g. overfly, navigate and lay submarine cables and pipelines.

3. Marine governance

In this chapter I introduce marine governance, such as instruments and processes for managing marine space and resources. Second, I unfold the main theoretical concept of this research; the marine governance framework by Soma et al. (2015), which connects marine governance and regionalisation.

3.1 Marine governance defined

The policy, actions and affairs regarding to the seas are building blocks of *marine governance* (Monaco & Prouzet, 2015: p. 12). Marine governance consists of rules and instruments that together aim at organising the human use of the seas in a more sustainable and integrative way (Galletti 2015; Smith, 2015). Marine governance aims at sustainability and realisation of the economic opportunities the seas are offering, and it's framed by the contexts of sustainability, globalization and common pool resource management (Henocque & Kalaora 2015). On one hand, it is about governing the marine space where different actions take place, but on the other hand it's also about governing the marine resources (Galletti 2015). Governance of the marine resources is often referred as *marine management*, which consists of regulations towards the human interactions between the marine ecosystem i.e. by setting no-go zones, penalties and catch quotas (Smith, 2015), while marine governance is more about the institutions and organizational framework of the whole system.

Sectoral approach of different marine sectors has led to fragmentation of the marine governance systems, temporal and spatial mismatches and difficulties in adapting scientific knowledge into practise (Young et al., 2010; Douvere, 2008). The cross-sectoral place-based concept of ecosystem-based management (EBM) has been suggested as an option to manage seas in a more integrative way, and recently it has gained more interest (e.g. Olsen et al, 2011). The intention of EBM is to identify ecosystems as a whole and take into account all human activities, socio-economic factors and jurisdictional issues that are affecting it (Douvere, 2008). However, it's a challenging task, because determining boundaries of an ecosystem is not straightforward (Young et al, 2010; Olsen et al., 2011). Identifying an ecosystem in general is usually quite uncomplicated, but the question remains where to set the outer boundaries – especially in the dynamic marine environment. Sizes of ecosystems vary on spatial scale from microscale to large areas, which leads to the question on which scale and administrative level should EBM be implemented? On local scale EBM encompasses smaller marine protected areas coastal zoning systems, focusing on local management acts such as protecting singular

species. On regional scale the scope is on regional ecosystems and larger marine protected areas (MPAs) (Olsen et al., 2011).

The other popular approach to marine governance is blue growth concept which aims at economic growth based on utilization of marine resources and space. Blue growth and EBM are to some extent opposing approaches, while the other one mainly intends to foster economic growth while the other one highlights sustainability (vanTatenhove, 2015). There seems to be less literature concerning blue growth than EBM and hence the definition of it varies. For example, the initiative launched by FAO (2014) is based on sustainability, while the EU approach is clearly more economy focused. The EU describes blue growth as a long-term strategy that supports the growth potential and innovations in marine and maritime sectors (European Commission, 2017). The strategy consists of three parts: 1) Intention is to develop marine sectors with high potential, i.e. aquaculture, coastal tourism, marine biotechnology, ocean energy and seabed mining 2) to provide knowledge, legal certainty and security in the blue economy, i.e. marine knowledge, MSP and integrated marine surveillance 3) Sea-basin strategies, tailor made solutions for regional seas and supporting transboundary cooperation.

There is a great variety of actors on different levels related to the policy making in marine governance, starting from local authorities to political institutions, NGOs and companies (Smith, 2015). The conditions of national and regional marine governance are set on the global scale by the regulations from UNCLOS and International Maritime Organization (IMO) that define the rights and duties concerning marine areas and shipping (Maes, 2008). Regional level in marine governance has been stated as perhaps the most demanding one to implemented in practise, because it's the level where a large number of complicated encounters is happening (Smith, 2004). Usually on regional level cooperation between two or several states is required. Regional marine governance is usually implemented by inter-governmental cooperation, committees and cooperation groups. In Europe, the EU supports transboundary cooperation and marine governance in general by giving guidelines and regulations that the member states are required to take into consideration in their policies (EU Regulation No 1255/2011). On national level, each state is responsible for their own maritime areas. Usually governments and ministries are responsible for the maritime matters, but traditionally the sea areas have not been on top of the agenda. However, especially after the regulations of the EU more actions to govern marine areas have been taken. Although mostly marine governance has consisted of top-down approaches and regulations, especially during the recent years also local level and involving stakeholders has been getting more common (Pomeroy & Douvere, 2008).

3.2 Marine governance and regionalisation – conceptual framework

Soma et al. (2015) present a framework for marine governance, which is used as the main conceptual framework in this study. The marine governance framework is built on EBM and processes of regionalization, and the authors describe its' purpose as to promote and boost transboundary cooperation in marine management as well as to provide guidelines for evaluating existing marine governance systems. The core of the framework is based on the principles of good governance, integration and cooperation (Figure 4), where cooperation and integration reflect the interactions between different levels and institutions of marine governance, and the principles of good governance indicate the manner in which integration and cooperation are implemented. Soma et al. (2015) underline that interactions that lead to regionalisation of seas are elementary in achieving a successful EBM process. My aim is to apply this framework in the Wadden Sea region and to investigate regionalisation while paying special attention to the MSP approach. The concepts of cooperation, integration and good governance offer a good structure for evaluating transboundary interrelations in the area. MSP connects to this process as a practice of marine governance, but also as part of regionalisation. Planning takes place in a certain space, but it also creates new space – or more precisely *region* in this case. Cooperation, integration and good governance are important aspects of MSP as well, as there is a multitude of stakeholders involved in the planning processes.

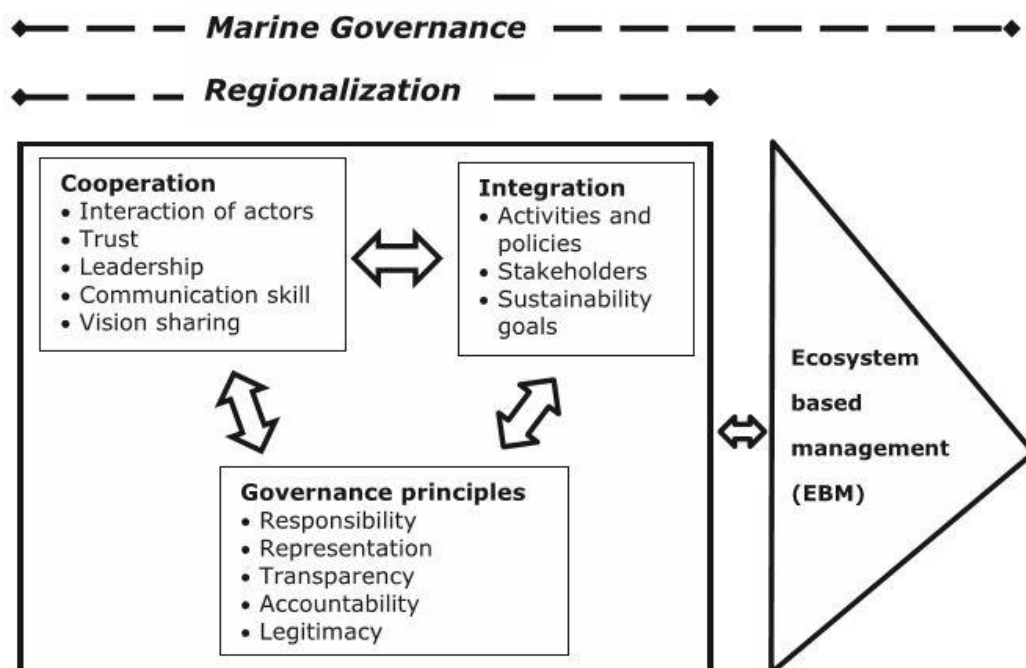


Figure 5 Marine governance framework by Soma et al. (2015:6) introduces how marine governance is part of regionalization processes. The core of marine governance is built on cooperation, integration and the principles of good governance.

Cooperation can be understood as actors coming together in order to define and achieve common goals and benefits. Public and private join together through interactions between the institutions and member states, regional sea conventions as well as the stakeholders (Soma et al., 2015). In the framework cooperation is approached through interactions between actors, behavioural and social norms, leadership and communication skills, and shared visions and partnership development. More specifically, based on the ideas of Haberman's strategic and communicative cooperation (Habermas, 1981) interactions of actors can refer to negotiations that aim for results, but they can also refer to mutual learning or deliberative processes. The second building block of cooperation are the behavioural and social norms, such as equity and trust, that are always included in policy-making. For example, moral reasoning between the wrong and right choices in relation to the interaction with other parties, is one element of the social norms. As third, leadership and communication skills are often required especially when the aim is to reach a certain common goal. This often requires communication between different levels to make for example conflicting issues visible. Final component of cooperation in the framework is vision sharing and partnership development that deal with long-term development and actors widening their point of view from their daily concerns. In other words, the focus is laid on how the partnership can foster the future development and achieving of i.e. sustainability goals, and also how to find new solutions to do so.

The second core element of the framework is *integration*, is referred to connection and coordination of activities and policies, organizations and stakeholders, but also to organising of plans, priorities and activities across governance organizations (Soma et al., 2015). In the framework it consists of three levels: integration of sectors and planning systems, integration of different views (stakeholders and governing) and integration of socio-economic and ecological policy goals.

Lastly, *principles of good governance* rely on accountability, legitimacy, responsibility, representation and transparency (Soma et al., 2015). Accountability is a relational concept that measures how leadership is being explained and the management justified. Legitimacy is the validity of an author to govern, which has been earned by the acceptance of stakeholders or it's a demographic status. Responsibility relates to specifying roles and ensuring liable outcomes of the process. Representation refers to choosing who should be involved in the process and how. Finally, transparency measures the visibility of the governance process. In the marine setting determining these is complicated, while there are many actors who share the responsibility.

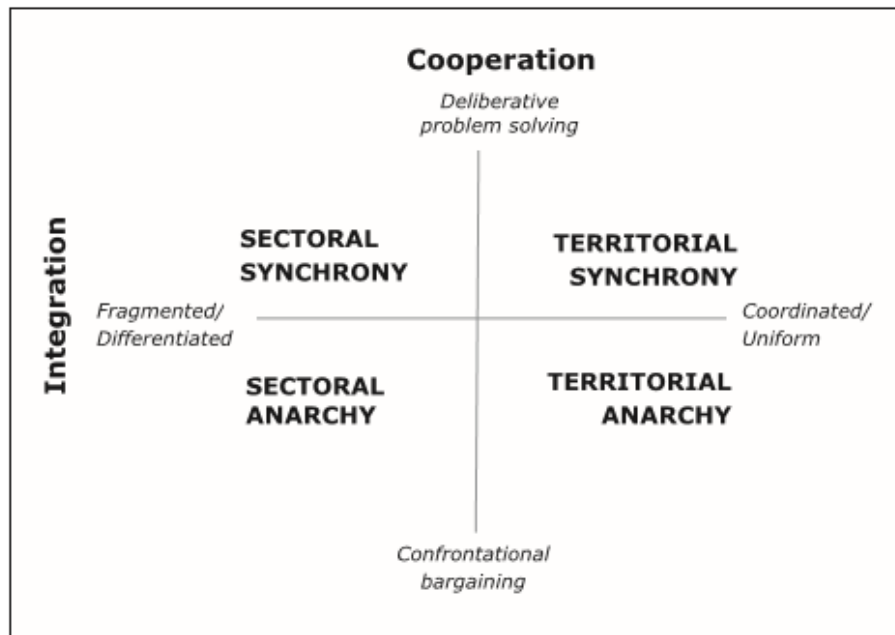


Figure 6 Forms of regionalization of seas according to Soma et al. (2015).

Soma et al. (2015) specify four modes of regionalization in marine governance based on the different levels of integration and cooperation (Fig. 5). The axis of integration measures how differentiated/fragmented or coordinated/uniform the systems are. The axis of cooperation ranges between confrontational bargaining to deliberative problem solving. Crossing of these two axis forms four different modes of regionalization ranging from the most coordinated and deliberative form of territorial synchrony, where policies and institutional arrangements integrates economic, social and ecological objectives in multi-level and multi-sector environment. “Sectoral anarchy” is situated in the opposite corner and it is the most fragmented and confrontational form of marine regionalization.

4. Marine spatial planning (MSP) and Integrated coastal zone management (ICZM)

Marine spatial planning (MSP) and integrated coastal zone management (ICZM) are ecosystem-based management tools for holistic governing and managing of the activities and marine space. Both concepts will be discussed in this section, because in the trilateral Wadden Sea strategies they are usually referred as ICZM, while the Wadden Sea countries also have their national MSPs.

The aim of MSP is to produce strategic and integrated framework for managing the use of marine areas adjacent to a coastal country (Douvere 2008). Furthermore, the purpose is to approach marine areas with a large-scale overview, taking into consideration different activities, their interactions and

impacts in the marine environment but also their connections with land, while avoiding conflict situations of overlapping human activities and nature conservation. The intention is to prepare long time plans and to make the planning process more transparent by engaging stakeholders. The idea behind MSP and ICZM is similar. Both concepts aim at shifting the view from sectoral approach to integrated cross-sectoral marine management, MSP generally in marine areas adjacent to coastal countries, ICZM in the coastal zone (Douvere, 2008; Gee et al., 2004). Even though MSP and ICZM are ecosystem-based tools, they are not intended only for conservation planning of protected areas, but rather for seeking balance between economic development and environmental protection.

Since 1970s environmental concerns have motivated developing new solutions to sea-related issues, such as pollution. Different coastal zoning tools were early examples of marine spatial solutions, although the origins of these projects were mostly in nature conservation rather than general management (Douvere, 2008). Early examples on MSP and ICZM include different zoning initiatives, e.g. the zoning system of Australia's Great Barrier Reef Marine Park, Florida Keys National Marine Sanctuary and the Eastern Scotian Shelf Management Initiative in Canada (Douvere et al., 2007). As these rely on nature protection approach, they are examples of marine space produced through nature protection discourse. More integrated approach, ICZM, developed from these zoning methods, and later with MSP the scope was enlarged from the coastal zone to territorial seas and EEZs. Interestingly ICZM projects were piloted in different places around the world, but in Europe the development took place years later, only starting from the mid 1990s (Gee et al., 2004). In contrary Europe has been forerunner with the MSP developments. The EU set Maritime Spatial Planning Act (2014/89/EU) and requires all member states to compile MSPs to their waters by 2021. In Europe the first MSP was compiled by Belgium (Douvere et al., 2007).

During the last couple of decades the number of MSP-related publications has clearly increased, and MSP has become a solid part of academic discussion. In 2008 Douvere stated that MSP is not a clearly defined or widely recognized concept, which according to her was part of the reasons why MSP was not perceived as an important nor reliable method for planning and governance. Now more than 10 years have passed, and I argue that the statement is not entirely valid anymore, at least when it comes to Europe. Use of marine space and resources have gained more attention. Due to the EUs Maritime Spatial Planning Act the coastal member states have been required to take MSP as a serious strategic approach. At the same time, it still applies that there is no solid definition on what MSP includes and how should it be implemented. Therefore, national MSP practices vary e.g. from very detailed spatial plans to vague strategic descriptions.

4.1 MSP in relation to land-use planning

The initial idea of MSP and ICZM is similar to the land use planning: to fit different activities and interests together, prevent the conflict situations and bring the participants together (Gilliland & Laffoley, 2008). Ehler and Douvere suggest (2007) that just as in terrestrial planning, efficient implementation of a MSP should include the following steps: defining and analysis, implementation, monitoring and evaluation. Planning in marine environment differs from land-use planning by e.g. the constantly changing 3-dimensional marine environment, availability of data, missing long planning traditions, differences in legislation and administrative areas (Kidd & Ellis, 2012). First, the weather conditions can change rapidly and according to the seasons. The streams, winds and tides make the marine environment constantly changing. This affects most of all the mobile activities, such as shipping, but also fixed activities if there is e.g. a risk for spreading pollution. Sea space is 3-dimensional which offers completely different opportunities for co-locating of multiple uses. The absence of physical borders on the sea surface affects on drawing the national borders. Ownerships and rights are different than on land, the spatial patterns of human activities are different. This leads to the question who should govern marine space and what is the scale (Maes, 2008)? There is lack of sense of place: in general people don't seem to be as interested in marine spaces as in land, excluding some groups, as the fishermen for example. Seas are still to large extent unexplored, there is not as much available data as in the terrestrial areas (Gilliland & Laffoley, 2008).

Planning practice has been largely based on the conceptualization of space through physical dimensions, absolute space, e.g. by using objects and forms as starting point for planning. Jay (2012) argues that so far marine field has largely been dominated by the nature scientists, which leads to more physical conceptualization of marine space (p. 82). Being a good starting point, conceptualizing space by recognizing objects is not enough for understanding complicated interrelations. There has been a shift from absolute point of view to more comprehensive understanding in planning thought and practise (Healey, 2007). Jay (2012) calls for better understanding of spaces created by the relationships between the objects and human interrelations in MSP.

4.2 Legal base for MSP

There are international and national regulations regarding MSP process. Planning is usually a top-down regulated process. On national scale the legal framework for MSP is based on the national legislation, usually spatial planning regulations and other relevant legal instruments, such as

environmental law. MSP is still rather new development and therefore adaptations in national legislations have only occurred recently, and they can differ a lot from state to state. On international level the important regulations that form the legal basis for marine governance and hence for MSP, include UNCLOS, the Convention on Biological Diversity, and the regulations of International Maritime Organization (Maes, 2008). The European Union adopted marine spatial planning directive as a part of the Blue Growth Objective (EU, 2014) and the directive states that “each member state shall establish and implement marine spatial planning” (Article 4:1). It defines the objectives and minimum requirements as well as the participation, cooperation with the other member states and data sharing regarding to the MSP.

UNCLOS does not mention marine spatial planning, but it defines the zones (internal waters, archipelagic waters, territorial seas, contiguous zones, continental shelves, exclusive economic zones and fishery zones) where coastal states are allowed to exercise jurisdiction – in other words international legislation produces marine regions. It also mentions management of sea space (Maes, 2008: p. 799). In internal and territorial waters, the coastal states have full jurisdiction based on the sovereignty to zone sea areas, in other words to plan activities and make marine spatial plans. The coastal states may allot areas for example for wind farms and other energy related projects, for exploitation and research of non-living resources, for aquaculture, protection zones around wrecks. The coastal states can expand their harbours and build artificial constructions, such as islands and jetties in internal waters and territorial seas. The coastal states shall legislate the safety of navigation and regulation of the maritime traffic, the protection of cables and pipelines as well as the navigational aids and facilities, other installations and facilities and the conservation of living resources and the environment of the coastal state (Article 21). The coastal state may require the foreign ships passing the area as innocent passage, to comply these conventions, even if the flag ship hadn't signed the UNCLOS (Maes, 2008). The coastal state may for example require certain shipping routes and traffic separation schemes for tankers or ships carrying dangerous materials. However, these requirements need to be clearly indicated and published on maps.

Term *management of the seas* is pointed out in several articles of UNCLOS. For the exploitation of the living resources in the EEZ areas is referred to in UNCLOS articles 61, 62, 65, 66 and 67. There is stated that the coastal state shall not let the living resources of the EEZ get endangered by over exploitation. In article 62 it's stated that the coastal state shall manage the sea area by laws and regulations, in order to conserve the seas. Articles 65, 66, 76, treats of the management of the marine mammals, anadromous stocks and catadromous species. Coastal state has sovereignty over its territorial waters and may for example extract nature resources, build wind mills and allot nature

preserves (UNCLOS: Article 2-4). The coastal state has sovereignty over exploring and exploiting the natural resources of the continental shelf. In case the coastal state is not doing it, no other state has right to undertake these activities (Article 77). All states are allowed to lay submarine cables and pipelines on the continental shelf but the coastal state may want delineation. However, the coastal state may not disturb the maintaining or impeding the laying of the pipelines or cables (Article 79).

4.3 Transboundary setting

Despite the fact that the seas are often transboundary spaces, there is lack of cross-border cooperation in marine spatial planning (Kidd, 2013). Although there is interest in marine spatial planning within the regional waters, the plans are often made and implemented only inside the boundaries of one state. Nevertheless, seas are dynamic and for example the currents and waves might easily transport pollution across the border. In this sense transboundary cooperation in marine spatial planning is an important issue. In this section I review transboundary aspects of spatial planning. The first part explores transboundary issues on land and the second part in the marine setting.

4.3.1 Transboundary cooperation and spatial planning on land

Border often refers to land border defined by agreement and it separates different states, societies, cultures and traditions (Knowles et al., 2006). Legislation, governance systems and markets are usually different on different sides of the border. A border might create a barrier effect which reduces and even prevents interaction across it. Individuals might be aware of a mental border that divides the area in known and un-known, which might lead to prejudices (Houtum & Strüver, 2002). However, after the cold war transnational development has been fostered by increasing of economic activities, integration and multilevel governance models and shift from the centralized model (Perkmann & Sum, 2002). This development has opened up the border spaces to diverse interactions that lead to formation of networks and cooperation and coordination in different forms (Perkman & Sum, 2002). This may generate functional regions that can be defined by the extent of the interactions. These cross-border regions vary from different forms of institutionalized transboundary cooperation to large scale growth triangles (Perkmann & Sum, 2002).

Cooperation in spatial planning across boundaries is needed to match the activities on both sides of the borders. Activities such as industry, transportation and other infrastructure might not only have effect on the other side of the border, but it's also beneficial to integrate for example railways and

roads. Spatial planning across the borders can be referred as “cross-border planning” or “transnational planning” (Durand, 2014), although these definitions are interchangeably used not only for spatial planning but to any type of joint decision making across the boundaries. However, transboundary cooperation in spatial planning is a difficult task. Difficulties in transboundary planning are related to i.e. differences in planning practices, in governance systems and cultural differences (e.g. Durand, 2014; Tölle, 2013). In theory the planning systems of separate states might seem no different from each other, because usually they consist of three levels; national, regional and local level. When it comes to practicalities, the differences come visible. For example, it varies a lot, what kind of tasks belong to which level and how things are binding in different planning systems (Tölle, 2013). Differences in definitions is usually the first problem one encounters when interacting between different planning systems. In some countries one definition might mean something else than the same literal translation would mean in the neighbouring country. One major obstacle for binding cross-border planning is that national regulations are centralized and local level decentralized must take into account the regulations by state, which has led to that there are no binding cross-border planning projects (Durand, 2014). As a result, transboundary planning is usually implemented at strategic level (Jay, 2016). To solve these problems, coordination and harmonization between the parties and policies are needed as well as relationships between nations and joint development strategies (Durand, 2014).

In Europe the EU has aimed at territorial cohesion and integration by defining strategies, such as the European Spatial Development Perspective (ESDP), and by programmes and funding, as for example INTERREG (Durand, 2014). Although the planning systems of the member states differ still to large extent from each other, Dühr & Nadin (2007) have stated that due to the impact the EU has had on the national planning practises and policies “Europeanization of spatial planning” is happening. The states must also coordinate with their neighbouring countries while planning (Durand, 2014).

4.3.2 Transboundary marine spatial planning

Although the current marine spatial planning acts are being implemented mainly on single national level, there are international agreements and working groups that foster transboundary cooperation, also around MSP. As with the transboundary land-use planning also transboundary MSP the forms of cooperation have been mostly strategic and not joint binding plans. To strengthen legal and institutional framework several international agreements have been established. For example, the OSPAR convention in the North East Atlantic, HELCOM in the Baltic Sea, The Convention for the

Protection of the Marine Environment and Coastal Region of the Mediterranean (The Barcelona Convention) and The Convention on the Protection of the Black Sea. However, these contracts have limitations. Often their focus is on environmental protection, instead of holistic view on socio-economic and environmental factors. They are also based on sectors, so they are not integrative enough to serve as a base for marine spatial plans themselves (Kidd & McGowan, 2013). Also, the cooperation is mostly implemented on a higher level, which means that connections with local level are weak. This leads to inefficiency for two reasons: the right stakeholders are hard to address and on the other hand, the problems on local level might be too distant from higher level regimes (Kidd & McGowan, 2013).

In the marine spatial planning directive of the EU it is stated that “*Member States should consult and coordinate their plans with the relevant Member States and should cooperate with third-country authorities in the marine region concerned in conformity with the rights and obligations of those Member States and of the third countries concerned under Union and international law*” (Directive 2014/89/EU: §20). The aim is therefore to ensure that the national plans are coherent and coordinated by 2021. However, the directive does not define what exactly is meant by the coordination and cooperation, but it remains for the parties to interpret.

The challenges regarding to transboundary MSP are similar to those related to land-use planning (Jay, 2016). As already mentioned, it's hard to address who are the responsible authorities for MSP cooperation (Jay, 2016). Van Tatenhove suggests that there is conceptual and institutional fragmentation related to transboundary MSP (2017). Conceptual fragmentation can be understood as different approaches of MSP, implemented in various institutional contexts in different ways. This refers mostly to the divergent approaches of EBM and Blue Economy. Institutional fragmentation consists of the patchwork of different institutions, policies and regulations related to transboundary MSP. As in the land use planning, there are difficulties hailing from the differences between governance systems and different practices. Technical difficulties are caused by information sharing, fitting the drawings together and combining the available data. Also, language barriers might be an issue in transboundary cooperation. Finally, despite the good intentions of the principles of for example EBM, there are still tensions between the national interests (Jay, 2016; van Tatenhove, 2017).

Some transboundary MSP pilot projects have been implemented in Europe. For example MASPNOSE in the North Sea, Plan Bothnia and BaltSeaPlan in the Baltic Sea were compiled to test transboundary planning in practise. The tasks were for example involving stakeholders from different

levels, coordination, integration. It seems that there is a growing interest and need for TMSP, but on the other hand nation states and stakeholders are sceptical about joint statutory planning (Van Tatenhove, 2017). The reason for this in short is that combining all political and jurisdictional systems and taking into account all the complex interactions and interests of stakeholders seems to be very problematic (Van Tatenhove, 2017). There is also a lack of defining and reasoning why MSP should be implemented across the borders (Van Tatenhove, 2017). To solve these issues, Jay concludes (2016) that focus needs to be laid on the inter-relations, not only addressing the environmental and geographical characteristics. As a contribution to this issue, Kidd and McGowan present a framework for partnership building in transboundary MSP (2013). The framework consists of ladders that can be used to identify the different stages of partnership in MSP. The five-step ladder starts from informal information sharing and end up in formal mutual regulations. However, as Kidd and McGowan suggest, the intention is not that everyone should aim at the highest level of the ladder, but to give value for each rung as they are.

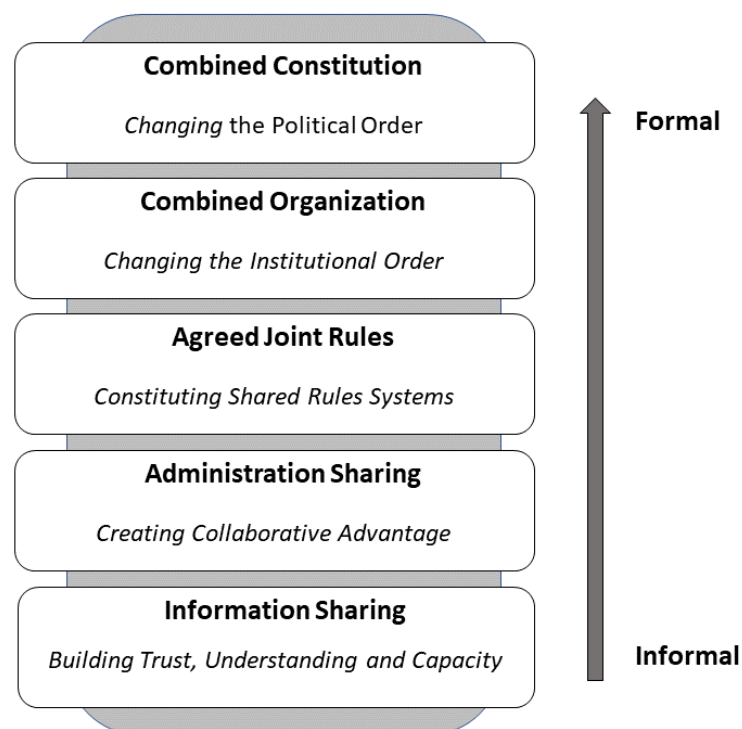


Figure 7 Framework for transboundary marine spatial planning (Kidd & McGowann, 2013). Kidd & MCGowan suggest a 5-rung ladder to support partnership building in MSP. The first rung is the most informal one, information sharing, and it's described as the common starting point. "Combined constitution" is the highest rung and it refers to the most formal way of integration. However, the purpose of the ladder is not to encourage all partnerships to aim at the highest level, but to use different rungs as guiding lines and as help to define to way forward.

5. Methodology

This chapter will introduce the materials and methods that were used for the research. It will describe how the research was conducted from the data collection, the conducting of interviews to the manner the analysis was conducted. It will also situate the used methods in the research tradition and the field of marine research.

Qualitative methods in marine research

As Jay (2012) points out, the seas are often approached with physical understanding of space, while the understanding of social space has been less highlighted. However, due to the growing interest in marine space and the developments of MSP, the number of publications on marine governance is also growing. In the previous research marine governance and marine spatial planning have often been approached with qualitative methods, such as semi-structured interviews, observing and content analysis of literature (e.g. Carneiro, 2013; Smith 2015). According to Winchester & Rofo (2010) qualitative research is interested in social constructions and experiences of individuals. Warren and Karner (2010: pp. 5) conclude that unlike quantitative research, qualitative methods can capture the understanding of social constructions and interpretations that would otherwise stay hidden behind the statistics. Social constructions can include i.e. political constructions, and against this background it's justified to choose qualitative methods also for this research.

As described in the introduction, my research has two aims: 1) to examine the construction of the Wadden Sea as a trilateral sea region and 2) to examine how this development is projected in the MSP developments in the area. For both I used qualitative content analysis. Firstly, I reviewed written materials in order to recognize what makes the constructions of the Wadden Sea region. My aim was to form a general picture of regionalisation of the Wadden Sea on different spatial levels, and for this purpose written documents provided sufficient information. For the question about MSP developments I sought for more experience-based information that the documents usually lack. I conducted semi-structured interviews in order to gain deeper insight. The reason for restricting the interviews only in the latter question was also practical: my research area is situated on the regional level, which brings in numerous stakeholders and complicated communication structures. To conduct interviews in a larger scale would have been timely and resource-wise impossible for me in this case.

5.1 Text documents

Sample of reviewed documents

To understand the process of the Wadden Sea regionalisation in my research area I reviewed different types of text documents, such as reports, laws, policy documents and strategies. At the center of my interest is the Wadden Sea as a trilateral region, but as I see it, the trilateral region consists of national spheres, and on the other hand the region is also part of a larger image. To this end, I searched for sources that concentrated on 1) the Wadden Sea region as a trilateral entity, 2) the national dimensions of the Wadden Sea region in Denmark, Germany and the Netherlands and finally 3) recognition of the Wadden Sea by the external, larger scale entities. To find the relevant documents related to each of these stages I searched online for the institutions that are responsible for the Wadden Sea matters. The search was partly implemented as snowball sampling because often the sources of one institution referred to other important parties that are involved in the Wadden Sea related tasks.

Relevant institutions are presented in the table 1. For the trilateral matters I concentrated on the work of the institutions Trilateral Wadden Sea Secretariat, Trilateral Wadden Sea Board and the Wadden Sea Forum. On national level the responsible parties in the policy making were mostly different ministries or different kind of institutions on the sub-regional level. On these levels information was found e.g. in regulations and development strategies.

There is a large number of institutions and entities that are responsible for a large diversity of Wadden Sea related tasks and hence there was a considerably large amount of material available. I restricted the sample of documents to those that corresponded with the regional aspect of the Wadden Sea: what are the factors that create the relational region, how is it visible in the governance and management?

	Entity
Sea regional (trilateral)	Wadden Sea Board Trilateral Wadden Sea Secretariat Wadden Sea Forum
National	
Denmark	Danish Ministries Danish Municipalities National park Denmark Danish Coastal Authority
Germany	Ministries of Schleswig Holstein Nationalpark S-H Ministries of Lower Saxony National Park Lower Saxony
The Netherlands	Ministries Rijkswaterstraat Waterschappen Provinces Municipalities

External	European Union OSPAR International Maritime Organization UNESCO
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Table 1 Entities involved in the Wadden Sea management

Challenges and ethical issues of the text documents

All written material was available online for anyone to access. Challenges with the documents were mainly related to the finding of the right information since the governmental structures and the approaches of Denmark, Germany and the Netherlands vary. Variation of national governance structures, governance of marine areas and the responsible authorities for the Wadden Sea was large and caused some difficulties in data search since comparing the management structures between the countries didn't always give hints about where to find the information. Secondly, the large number of actors forced to carefully consider which are the relevant ones to include in this study without enlarging the task too much. Third challenge was related to languages. Trilateral documents were all available in English but national materials were translated only to some extent. In some of the cases there was a summary of the documents available in English, or at least on the website there was a summary page written with more simple language, which made it possible to do double check the information. Also concerning foreign languages there is always a risk for misinterpretations.

5.2 Semi-structured interviews

Qualitative interviewing is a method pursued by discussion face-to-face, telephone or through internet (Warren & Karner, 2010). According to Kvale (1996: pp.31) the most important task of interviewing is understanding the meaning of what interviewees say. It's about interaction between the interviewee and the respondent, a conversation that produces information from the respondent (Holstein & Gubrium, 2003: pp. 3). It differs from day-to-day discussion by its structured format, starting from the structured survey interviews to informal unstructured interviews. In between stays the semi-structured interview, where the structure of the interview follows certain themes, around which open-ended questions are constructed. Interviews can be conducted with one respondent or several respondents at the same time.

Choosing interviewees

For qualitative research sampling, such as choosing of the right interviewees, needs to be theory-based, a fit with the research questions – unlike with the quantitative research where the aim is to get a representative sample of larger crowd for example by random sampling or other sampling strategies (Warren & Karner, 2010: pp. 141). I had three criteria for my interviewees:

- 1) the sample of interviewees should represent the whole research area, meaning that I needed interviewees from all the three Wadden Sea countries: Denmark, Germany and the Netherlands.
- 2) The interviewees should be experts on the field of marine governance, preferably MSP or ICZM
- 3) If possible, the administrative level that the interviewees would represent should have some connection with the management of the Wadden Sea.

The fact that the administration of the Wadden Sea includes a high number of different authorities, administrative levels and stakeholders, made it complicated to restrict the respondent sample. On the other hand, it was important to receive a comprehensive image of the research questions, on the other hand there was a risk that the number of participants could grow too large without a well-defined interviewee sample. There is no set number how many respondents should be included in interview research, the sample size depends on topic and research area. Basically, the sample is large enough when the *saturation point* is reached, meaning the point when new respondents don't offer significantly differing information compared to the previous interviews (Kvale, 1996: p. 102). My strategy was to approach experts responsible for the national MSP in the research area, and in this case it meant the national level authority in Denmark, the national level authority in the Netherlands, and national and state level in Germany. To include the sea-regional perspective, I approached the authorities responsible for the trilateral Wadden Sea cooperation as well.

The interviewees worked for different types of authorities concerning marine governance, MSP and the Wadden Sea cooperation (Table 2). The tasks of the organizations included compiling marine spatial plans and marine strategies, coordinating stakeholder cooperation and Wadden Sea cooperation.

Type	Country	Organization type	Role and tasks
Planning	Denmark	National MSP	MSP in collaboration with other governmental organizations
Planning	Germany	National MSP	Marine management and spatial planning in the EEZ Marine environment Shipping
Planning	Germany	State level MSP	MSP in TS ICZM
Planning	The Netherlands	National MSP	Bringing the stakeholders together, Collecting views for decision makers, identifying conflicts and finding solutions
Cooperation	Transboundary	Wadden Sea Cooperation	Trilateral stakeholder cooperation on ICZM

Cooperation	Transboundary	Wadden Sea Cooperation	Coordinating the trilateral Wadden Sea cooperation
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Table 2. Tasks, roles, and types of the interviewed authorities and organizations.

I approached the possible respondents mainly directly by email, in some cases followed-up by a short phone call if I didn't receive any response by email. In a few cases I was using snow ball sampling method, where the key informants of the topic are interviewed, and after the interview they could advise for more possible respondents that could be approached. I approached 9 different authorities, of which 7 agreed to have an interview. Those two who didn't participate in my research also answered to my request but they were too busy to take part in an interview or didn't think that they could provide any useful information.

5.2 Conducting the interviews

The location of my research area was relative far in terms of travelling there from Finland, which made the setting of the appointments rather challenging. Luckily, I was able to be quite flexible with my schedule. Four of the interviews were conducted on site, one by phone and one by Skype. One of the interviews had two participants, rest of them one, altogether there were seven interviewees. Interviews took usually around 40-50 minutes, while the shortest lasted around 40 minutes and the longest almost two hours. The data was collected between June - October 2018. All interviews were conducted in English.

On-site interviews were conducted at the offices of the respondents, as it was more convenient for them. Also, it's preferred to conduct interview research in a place with as few disturbing factors as possible, and this was easy in a quiet office environment. In a peaceful environment there is less disturbance, which makes it easier to concentrate on the interview. It makes both feel more comfortable, which creates trust and results in getting good quality answers easier.

I had sent the structure of my interview to the respondents already beforehand so that they could have the opportunity to familiarize themselves with the questions before the meeting. The procedure of the interviews was the same, regardless of being it an on-site interview or conducted by phone or Skype: first I once more summarized the topic of my research, asked for the permission to record the discussion and explained that I will handle the data anonymously, I will use it only for my masters thesis and that I will store it until my thesis has been accepted. After the organizational matters I started the interview and asked my questions.

Semi-structured interviews consist of certain topics to be discussed or open-ended questions that give the respondents the opportunity to consider the topic and answer with their own words (Warren & Karner, 2010: pp. 157). In semi-structured interview the interview questions might be asked in a varying order, more questions can be added, or some can be left out. Depending on the role of the respondent, I had 10-12 main questions, some of them supported by sub questions. Some of the questions were not relevant for the planners while some other questions were not relevant for the representatives of the trilateral cooperation. In those cases, I either left the whole question out if it was something that I was sure did not concern the respondent at all, in some cases I asked the question just to see if the respondent was familiar with the topic and could offer any additional information. Sometimes the respondents got inspired by my questions and gave information on something that was beyond the question.

The role of the interviewer in a semi-structured interview is to keep the strings on hand but at the same time interfere as little as possible, because it might disturb the respondent and loose the direction of the discussion. However, the interviewer should be a good listener, by keeping the eye contact and giving short signals such as noddings, so that the respondents gets the feeling that they being are heard and that their words are interesting, which encourages them to share more views. As Warren and Karner (2010: 162 pp) point out, even if interviews are conversation alike, they are still not everyday conversations, which makes it important to consider how much to intervene into the discussion. I mostly just asked the questions and let the respondent talk, while giving signals that I'm listening, and waited until they had finished. I asked follow-up questions if the direction of the response didn't directly include the answer to the question, or if there were something new and interesting in the responses. Interviewees with whom I met face-to-face showed also maps, graphs and other types of documents to illustrate their work.

The interviews were recorded and transcribed. The respondents were informed about this already in the contact email and asked for permission once more on site before starting the interview. It was also made clear that the data would be used only for the thesis and the recordings and transcriptions would be deleted after my graduation process.

After each interview I wrote a short description of the interview session including some notes and remarks that could be useful for the next interviews and for the analysis.

5.3 Analysis

After the interviews the recordings were transcribed. I transcribed detailed word by word, because it's always easier to transcribe too much than later trying to figure out the gaps. Also, as Warren and Karner point out (2010: p. 169), it's important to transcribe everything, including the own questions, because they have affected what the respondent says. Warren and Karner continue that it's as important to transcribe everything that the respondents have said, even though it might seem irrelevant, because it might reveal to be relevant once doing the analysis. At the same time, it was helpful to go through the interview once more with thought and get ideas for the analysis. After the interviews it's essential to transcribe the recorded material right away while the interviewing situation is still clear in mind. Esterberg (2002: pp. 151) suggests that the analysis phase should be started already on the field so that there is the chance to reflect and interpret and change something in the interviewing process when needed.

Qualitative data analysis is referred as the process of making meaning (Denzin, 1989). It's not always a straightforward process of finding all of the meanings served in the data, but to interpretate and actively create the meanings out of the data (Esterberg 2002, pp.152). To some extent the process requires creativity since there is no single right way to conduct a qualitative analysis (Esterberg). Basically, the steps for analysing qualitative data are as follows (Fig. 8): getting familiar with the data, coding the data, developing themes, making meanings and finally, as actual analysis to find patterns, comparing cases and so. The first step, familiarizing with the data requires reading the transcript over and over to memorize the content, getting an overview of the whole data and making some initial notes. As Hirsijärvi and Hurme state (2009), understanding the material is the precondition for a successful analysis.

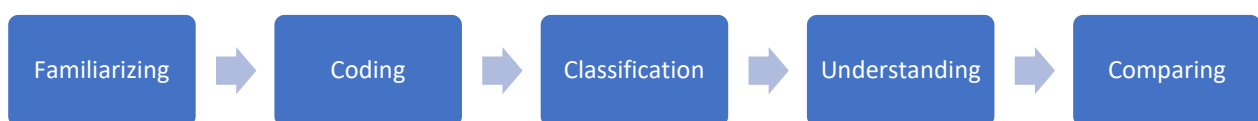


Fig. 8. The process of analysing qualitative data

Once one feels that one has internalized the content of the interview transcription, one can start coding the data: to mark certain themes and categories, which seem interesting or recurrent (Esterberg, 2002, pp. 158). The idea behind coding is to compress and organize the material and to create structures for the analysis. I went through the transcripts line by line and marked themes and categories by using

two strategies. First, I used *open coding* and went through the material without using any preestablished codes but instead seeing which topics and themes are recurrent in the data. By doing this, one tries to avoid limiting the coding to the predefined topics, something that is ought to be found, but instead lets the data offer its own insights (Esterberg 2002: pp.158). Second, I once more went through the material and marked the predefined themes of the marine governance framework (Soma et al, 2015) to keep the focus of the research and to ensure that I will be able to answer to my research questions.

When the point of saturation in the coding process has been achieved, meaning that the coded themes become recurrent and no new codes seem to be needed, the codes can be drawn together into to classified themes (Esterberg 2002: pp. 159). The whole process of coding and classifying is for reducing the qualitative data and to make it more digestive. However, as Coffey and Atkinson (1996) suggest, it's not about making the data simpler, the opposite, it will make the data more complex – while also making it offer more opportunities. Coffey and Atkins name this the *data complication*.

Once the coding and classification are done, it's time to move on more towards to the meaning of the data. In order to achieve this, it's useful to go through the themes by asking questions such as who? what? where? when? to understand the relationships and the meanings behind the data (Esterberg, 2002: pp.166-167). Asking this kind of questions has also been referred as *active reading method* (Dey, 1993). Not only do these questions help in understanding the data, but they might also help to describe the results to others (Esterberg 2002: pp.167).

The actual analysis consists of recognizing similarities and differences in the data that form patterns, comparing data sets and constructing typologies (Esterberg, 2002: pp. 168). The patterns might be for example differences in the interviews around the same topic, differing ways to handle a similar issue and so on. Each interview could be a case and by comparing these and the recognized patterns more systematically (pp. 168). By comparing one can also recognize typologies of for example different types of respondents (pp. 169).

5.4 The challenges and ethical issues concerning the interviews

As Warren and Karner (2010: pp 32) conclude, social research, such as interview, does not take place in a vacuum, but in certain socio-historic circumstances, which include legal, ethical and political issues. Hence, ethical issues were to be considered carefully in each step of the research process. Kvale (1996: pp. 153-154) divides the ethical concerns of interviews into three categories: informed

consent, confidentiality and consequences. Informed consent denotes the informing of the respondents about the content and the purpose of the interview (Kvale, 1996: pp. 153). The respondents were informed and asked for the permission to record the interviews already when I contacted them for the first time, and again before starting the interview. I explained for the respondents that the data will be used only for my thesis, and that all recordings and transcriptions will be deleted after my graduation process. Confidentiality includes handling the confidential topics in the interview transcriptions and reports, as well as the issues of the anonymity of the interviewees (Kvale, pp. 154). I handled the data confidential and anonymous, and the respondents were also informed about this. Kvale highlights (pp. 172) that it's important to take care of the secure storing of the recordings and transcriptions. I kept the materials private and didn't show them to anyone during the process. As I informed my interviewees, in my thesis I'm not mentioning the names of my respondents, instead they are referred as *interviewee X* and the role of their organization is mentioned. However, none of my respondents expressed any wishes regarding their anonymity. Third of Kvale's categories (pp. 154), consequences, contains how the interview results might affect the interviewees. As some of the interviewees were representing national authorities, such as ministries, I was prepared that some of the themes appearing in the interviews might potentially be sensitive. The intention of my thesis is not to disturb or damage the relationships in my research area, or publish confidential information. However, the respondents referred during the interviews to materials that are available online and didn't ask me to leave out any parts of the discussion. I offered also the interviewees the opportunity to see the transcribed version of the interview.

6. Results part I: Wadden Sea as a relational sea region

This chapter introduces the results of the first part of this research: how is the Wadden Sea constructed as a region. First section concentrates on evolution and constructions of the trilateral Wadden Sea. Second section explores the national constructions: how is the Wadden Sea viewed as an entity in the national governance and what are the connections with the sea-regional scale? As a result the multilevel construction of the Wadden Sea region should be approached with relational understanding of space.

6.1 Long path of development of the Trilateral cooperation

As referred in chapter 2, unique environment, North Sea culture (cultural identity, activities) and the location has characterized the Wadden Sea throughout the times. However, it was not clear from the beginning that the area is valuable as such nor that there is need for trilateral cross-border cooperation to preserve those values. The common factors were noted to be valuable first on national levels and were attempted to be preserved with national strategies. Environmental activists and scientists had a remarkable role firstly in addressing the value of the Wadden Sea, and later in building the basis for the cross-border cooperation, and hence the Wadden Sea regionalization was started as scientific and protection discourse (Enemark, 2005: 998).

Until the second half of the 20th century the Wadden Sea was generally perceived as an economically lagging and worthless periphery, and the governments had plans to utilize the area more efficiently by damming large parts of the Wadden Sea, constructing harbours and industry. From the capitalist point of view the environmental values of the Wadden Sea were not valuable, but there were interests to develop the economic value of the adjacent land areas. Dutch environmental activists were the first ones to protest these plans and they formed the first Wadden Sea protection association, *Landelijke Vereniging tot Behoud van de Waddenzee*, in 1965 (Waddenvereniging, 2019). They were soon followed by researchers and the German environmental movements, and collaboration with the Dutch association they demanded protecting the Wadden Sea from the internal and external threats, such as pollution and other human impacts on the ecosystem (Enemark, 2005: 998). There were small protection areas scattered in the Wadden Sea, but scientists and NGOs, such as WWF argued, that the Wadden Sea should be managed as one whole ecosystem and underlined the establishment of national parks and international agreements (Maribus, 2017).

The official start of the trilateral Wadden Sea cooperation dates to 1978 and in the first trilateral Wadden Sea Governmental Conference, where the decision was taken on governmental level to strengthen the cooperation in the Wadden Sea protection (Slob et al., 2016). Thus, the Wadden Sea cooperation is based on nature protection. In 1982 the Wadden Sea countries signed the Joint Declaration, the document on which the Wadden Sea cooperation is based on (Enemark, 2005: 1000). The Joint Declaration is legally non-binding, but the value of the instrument is the commitment of the three countries to address their responsibility to manage the Wadden Sea as a trilateral marine area (Slob et al., 2016: p. 326; Enemark, 2005: p. 1000). By the declaration Denmark, Germany and the Netherlands agreed to allocate their activities in a cooperative manner by consulting each other (Slob et al., 2016: pp. 326). It was also agreed to take into account the relevant regulations, such as Ramsar convention and Bonn Convention, and directives by the EU. In other words, the trilateral cooperation

itself is not legally binding, but international regulations and national legislations offer legal instruments that can be used for designated issues in order to diminish negative human impacts on the Wadden Sea.

The organisational structure of the trilateral cooperation was developed further. In 1987 the Common Wadden Sea Secretary (CWSS) was established to support the coordination of the trilateral cooperation (Enemark, 2005). The Trilateral Wadden Sea plan was made applicable in the Wadden Sea area in 1997 (Enemark, 2005: p. 1000). The Trilateral Wadden Sea Plan is a joint policy and vision for the sustainable management of the trilateral area, institutional and financial arrangements. In order to improve the stakeholder engagement in the trilateral cooperation the decision was taken in 2001 to establish a stakeholder forum, the Wadden Sea Forum (WSF) (Slob et al., 2016: p. 326). The organisational structure and the tasks of the Wadden Sea cooperation are described more in detail in the following section. The cooperation area covers the tidal area, the islands, offshore area and the main estuaries of the Ems, Weser and Elbe and also the EEZs of Germany, Denmark and the Netherlands. According to the Wadden Sea Secretariat (2016) the cooperation tasks are:

- protection and conservation of the Wadden Sea as an ecological entity through common policies and management
- monitoring and assessing the quality of the Wadden Sea ecosystem in collaboration with national and regional authorities and scientific institutions as a basis for effective protection and management
- international cooperation with other marine sites on protection, conservation and management
- engagement of the public in protection of the Wadden Sea through awareness-raising activities and environmental education
- securing the sustainable development of the Wadden Sea with respect to its natural and cultural values

All these tasks rely strongly on the ecological aspects of the Wadden Sea. Therefore, nature protection is the defining aspect of Wadden Sea regionalisation.

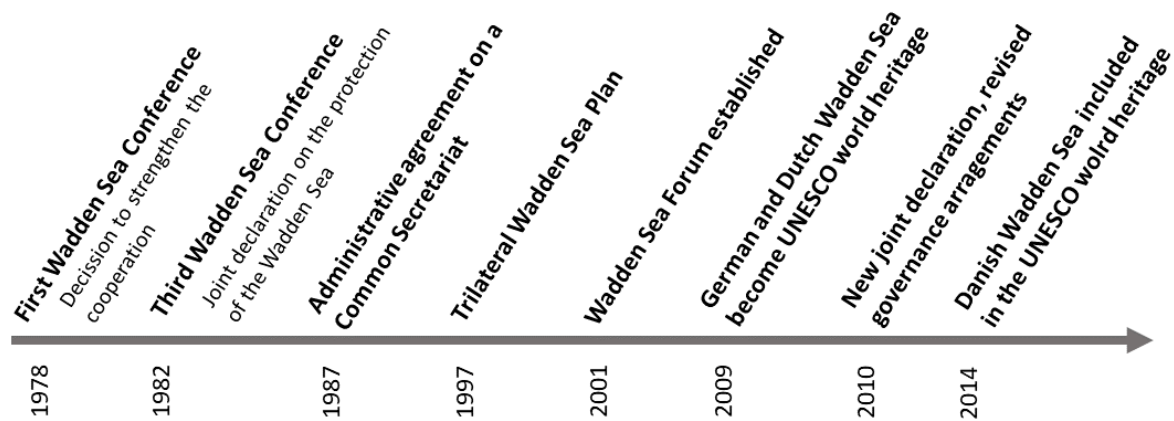


Figure 9 Timeline of the trilateral Wadden Sea cooperation

6.2 Structure of the trilateral Wadden Sea cooperation

Wadden Sea cooperation is divided on high level governmental cooperation, secretariat and stakeholder cooperation. Cooperation is organised on different spatial scales, which makes the cooperation more comprehensive. By including stakeholders and higher level in the cooperation ensures that the cooperation does not remain too distant from the practical implementation, but on the other hand the it is not a grass-root remaining too far from the decision making either. The arrows in the organogram (Figure 10) illustrate connections between the different scales of the cooperation. It portrays that there is coordination and discussion between these scales, which brings them closer to each other. Interactions and information sharing bring the different scales of the cooperation closer to each other and hence strengthens the cooperation and the Wadden Sea regionalisation that occurs through transboundary interactions.

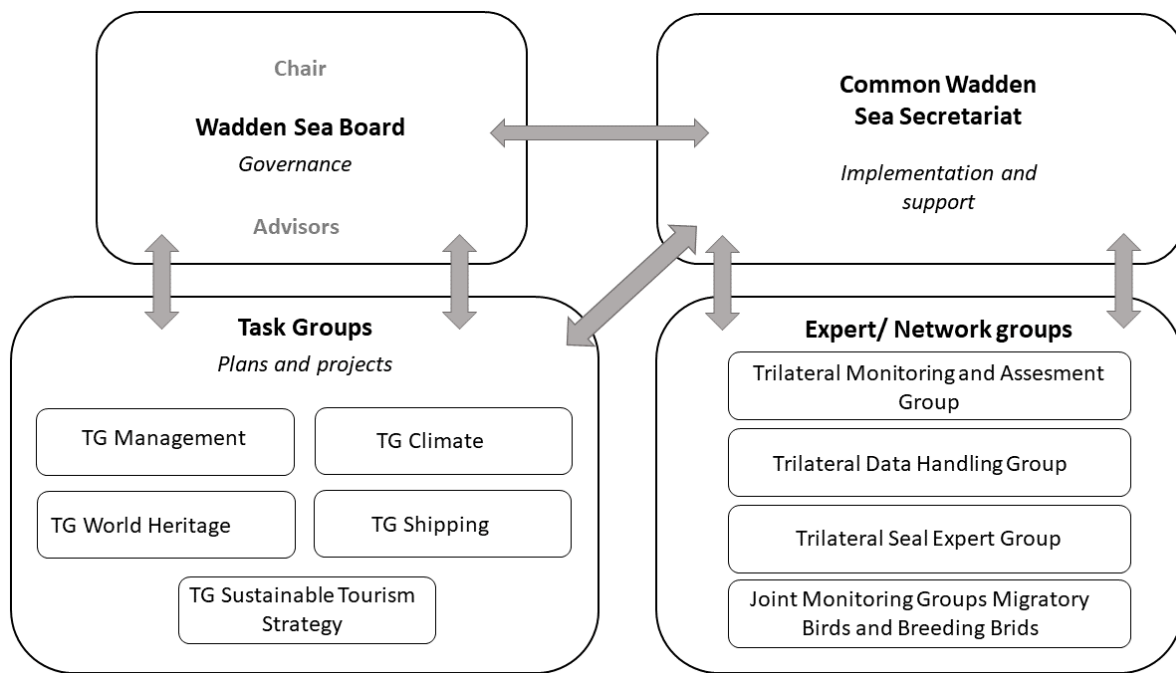


Figure 10 The organizational structure of the Wadden Sea cooperation (CWSS, 2016).

6.2.1 Trilateral Wadden Sea Governmental Council and Wadden Sea board

The cooperation in the higher level Wadden Sea management is divided on two levels (Slob et al. 2016): 1) *the Trilateral Wadden Sea Governmental Council* and 2) *The Wadden Sea Board*. 1) *The trilateral Governmental Council* consists of the ministers, who are responsible for the affairs concerning the Wadden Sea (CWSS, 2019). It's the body that is politically responsible of the national level and cooperation between the three governments. The council meets every three years at the Wadden Sea Governmental conference. 2) *The Wadden Sea Board* is the governing body for the cooperation. It takes care of the work and stakeholder relations in between the Governmental Council meetings, oversees the operational and advisory bodies and prepares, adopts and implements the Trilateral Wadden Sea Cooperation Strategy.

The governance structure of the trilateral cooperation was evaluated and reviewed in 2007. The decision to do this was made in the Tenth Governmental Conference in 2005 due to the fact that the structure had remained the same since the beginning of the cooperation, although at the same time “*there have been many contextual changes within and outside the Cooperation (eg. new EU legislation and networks, new global treaties, regionalisation, emphasis on the ecosystem approach and stakeholder involvement, electronic communications etc.)*” (Governance Arrangements, 2017: pp.1). The structure was updated to better correspond with the contextual changes, to follow principles of good governance and to improve issues that were brought up during the evaluation.

6.2.2 The Common Wadden Sea Secretariat

The Common Wadden Sea Secretariat is a body supervised by the Wadden Sea board. The secretariat is supporting and coordinating the trilateral cooperation (CWSS 2016). The responsibilities, tasks and the legal status of the CWSS are specified in the Administrative Agreement 2010. The tasks of the CWSS are described as follows (CWSS, 2019):

- coordinates, promotes and supports activities of the Cooperation;
- is responsible for the preparation and production of documents for ministerial conferences, meetings of the Wadden Sea Board (WSB) and trilateral work groups;
- collects and evaluates information on monitoring, protection and the ecological condition of the entire Wadden Sea;
- is the central contact for the UNESCO Wadden Sea World Heritage;
- produces and publishes reports by the Cooperation;
- involves the public in the protection of the entire Wadden Sea area through communications, awareness building and environmental education.

6.2.3 Wadden Sea Forum

In close cooperation with the Common Wadden Sea Secretariat is cooperating the independent stakeholder platform, the Wadden Sea Forum (WSF). The WSF was established in 2001 as a result of decision at the 9th Governmental conference of the Trilateral Wadden Sea Cooperation (The Wadden Sea Forum, 2016). The intentions of the WSF are to bring the stakeholders together and to integrate cross-sectoral and transboundary strategies on the fields of agriculture, energy, fisheries, industry, harbours, nature protection and tourism. It's working on both the local and the regional levels, while the national level is represented by observers. The Wadden Sea Forum is the main stakeholder platform for information sharing. Trilateral working groups of the Wadden Sea Forum are bringing together different sectors and administrative bodies in order to exchange knowledge, developing the common aims and objectives (WSF, 2013). Working groups around different topics, i.e. ICZM, compile strategies and give recommendations. One of the main tasks of the Wadden Sea Forum is information sharing and awareness, which is implemented by organizing workshops and symposia around different topics. Projects, such as compiling sustainability indicators are used to provide information for decision makers.

Therefore, WSF has an important role in the Wadden Sea regionalization by bringing together stakeholders on different scales and from different Wadden Sea states. WSF does not make political decisions, but the participating stakeholders deliver information between the national and sea-regional scale. This way the discussions in the trilateral meetings can be taken into account on national

scale, and accordingly topics of national importance can be brought on table on the sea-regional scale. The discussed topics and the thematic working groups, such as coastal protection and tourism are common interests for all Wadden Sea states. Discussing these topics together promotes deliberative decision making and strengthens the regionalisation of the Wadden Sea.

6.3 Other relevant policies and regulations

External policies and regulations that are considered in the trilateral cooperation are mainly related to the protection of the ecological values of the Wadden Sea. This means that Wadden Sea is viewed as an ecological entity, *region*, on a larger scale.

EU regulations are considered in the trilateral cooperation and also on the national level of the Wadden Sea governance. Therefore, EU has an important role in producing Wadden Sea region. EU habitats directive (Council directive 92/42/EEC) aims to conserve natural habitats and wild fauna and flora and promotes the maintenance of biodiversity. Combined with the Birds Directive (2009/147/EC) the Habitats Directive form the Natura 2000 areas, a European wide network of protected areas. The Water Framework Directive (Directive 2000/60/EC) aims at good status of surface waters by requiring the EU member states to manage their waters in holistic manner. The Marine Strategy Framework Directive (Directive 2008/56/EC) concentrates on the protections of the European marine environment. Each of the directives are included in the Wadden Sea Trilateral Monitoring and Assessment Programme (TMAP), which purpose is to monitor and report e.g. population developments and changes in landscape in all environments of the Wadden Sea. These directives form the basis of the ecosystem-based approach in the Wadden Sea region, however, the Wadden Sea Plan (WSP, 2010: pp. 12-13) states that combination of the directives is partly insufficient. First, the Directives were created in different decades and they indicate different political and environmental approaches, e.g. the Birds Directive is rather sectoral, while MSFD represents more holistic approach. Second, there are structural differences in the Directives, which makes it difficult to implement them. Thirdly, according to the principle of subsidiarity, the implementation of the Directives takes place on the national level. Practices of implementation vary between the countries, which makes comparison and cooperation across the borders more challenging.

In addition to the mentioned Directives the EU provides a framework for MSP and ICZM (Directive 2014/89/EU). The aim of the directive is to support sustainable development of the European coastal

and marine areas. MSP and ICZM in the Wadden Sea context will be reviewed more in detail in the second part of this research.

One of the biggest acknowledgements of the value of the Wadden Sea has been the UNESCO World Heritage Status. German Wadden Sea National Parks and the Dutch Protection area of the Wadden Sea received the World Heritage status in 2009. Trilateral World Heritage area was completed in 2014 when the Danish parts of the Wadden Sea received the status as well (UNESCO Decision : 38 COM 8B.13). To receive the nomination, the following criteria needs to be fulfilled: outstanding value, integrity, and protection. The World Heritage Site nomination means that the Wadden Sea site is globally very remarkable: other UNESCO World Heritage Sites are for example the Great Barrier Reef and the Grand Canyon. The World Heritage Nomination is one example on how Wadden Sea region is produced as one entity in the transboundary context. Also here the nature protection approach has a remarkable role in defining the Wadden Sea as an UNESCO World Heritage Site.

In 2002 the Wadden Sea was pointed out as a Particular Sensitive Area (PSSA) by the International Maritime Organization (IMO). To receive the PSSA status, the area needs to be remarkable from ecological, socioeconomic or scientific point of view, and maritime activities need to project a potentially harmful effect on them (IMO Resolution A.982(24) §1.2). The Wadden Sea is part of the North Sea, and as the North Sea is very densely populated by different sizes of vessels, and important harbours are located in the direct neighbourhood, it was stated that the significant ecological, socio-economic and scientific aspects and the vulnerability should be taken into account when organizing international shipping activities. As a result, the protective actions are taken by the traffic separation scheme and MARPOL Special Area North Sea to prevent the negative impacts. Wadden Sea was the first PSSA that was applied in collaboration by several countries. The PSSA status is also an example of producing the Wadden Sea region from the nature protection perspective, and as a transboundary entity.

6.4 Defining the internal structure of the Wadden Sea as a region

In this section I clarify how the Wadden Sea is approached on national scale as a region in Danish, German and the Dutch marine territories, and whether there are differences between the countries. The purpose of this section is to understand how the Wadden Sea is managed in each of the countries and what are the connections with the sea-regional level.

6.4.1 Denmark

The Danish Wadden Sea is on one hand state property, but the municipalities have an active role on the local and sub-regional level. According to the Danish Maritime legislation, both EEZ and territorial sea are state property, and their governance takes place on the national level by ministries and their sub-institutions. In addition to the state level governance, the coastal municipalities have rights to the coastal area. At the coast there are also tasks related to coastal protection and infrastructure, which are managed by the Danish Coastal Authority, an institution under the Ministry of Environment.

At the Danish Wadden Sea coast there are four municipalities: Varde, Tønder, Fanø and Esbjerg (Vadehavssekretariat, 2019). The municipalities are cooperating in the Wadden Sea related tasks. Since 2007 they are responsible for *Kommunernes Vadehavssekretariat*, the Wadden Sea Secretariat of the Danish municipalities (Vadehavssekretariat, 2019). The secretariat coordinates and implements the technical and environmental tasks related to the Wadden Sea on the municipality level. One of the secretary's tasks is also to assure that the UNESCO World Heritage Site of the Danish Wadden Sea is secured. Vadehavssekretariat consist of technical steering group, which includes representatives of the technical and environmental departments of the Wadden Sea municipalities (Vadehavssekretariat, 2019). Although the Danish Wadden Sea is mostly part of central governance when it comes its' extent in the Danish marine territory, the municipalities have a strong role in producing the Danish Wadden Sea region. The municipalities cooperate closely on Wadden Sea related issues, and therefore Wadden Sea regionalisation in Denmark is at the same time regionalisation of the Danish Wadden Sea municipalities.

Vadehavssekretariat works also as secretary for *Det rådgivende Udvalg for Vadehavet* (RUV), the Advisory Committee of the Danish Wadden Sea (Vadehavssekretariat, 2007). According to their Rules of procedure (2007), the task of the RUV is to advise authorities and decision makers in the Wadden Sea related issues. Each of the four municipalities chooses representatives for the RUV, and additionally 20 other authorities and organizations are represented, such as nature and fishery organizations, Ministry of Culture, Region of Syddanmark and Esbjerg harbour (RUV Kommissorium, 2007). In the mission document the aim of the RUV is concluded as preserving and developing the Wadden Sea region as cultural and nature environment by using the area in ecologically, economically and sociologically sustainable way and by taking into account the national and international agreements. RUV organizes meetings approximately twice every year, and usually they are organized after the meetings of the Trilateral Wadden Sea Forum. This way RUV can react to the topics that have been handled in the trilateral meetings. The meetings of RUV are open for

anyone to attend and they are promoted in the local newspapers and online beforehand. Meeting documents are available online and anyone can download them.

In addition to the Vadehavssekretariat and RUV, Denmark has established a Wadden Sea related stakeholder forum, *Vadehavets Formidler Forum* (VFF), which gathers stakeholders to discuss on Wadden Sea related issues and strengthens the communication. Stakeholders participating in the VFF include i.e. Danish Nature Agency, the Wadden Sea National Park, museums, Outdoor Council and other institutions and organisations in the area. As with RUV and the Vadehavssekretariat, the approach is through both nature and culture values of the Wadden Sea. The task of the VFF is to coordinate the nature and culture management related to the Wadden Sea. The vision of the VFF is compiled in the Plan 2019-2024 document (VFF, 2018). VFF cooperates closely with the Wadden Sea National Park.

Wadden Sea as national park

The Danish Wadden Sea National Park is one of the institutions that sets the most requirements for other stakeholders in the area. In Denmark the Wadden Sea national park was established in 2010, which was later in comparison to the national parks in the other Wadden Sea countries. The concept of national parks is relatively new in Denmark, since the first National park was established in 2007 and the Wadden Sea national park was only the second one to be opened. In the context of the Danish national parks Wadden Sea is remarkable, because by area of 1495 km² it's the biggest national park. The national park is governed by government appointed by the Ministry of Environment (Bekendtgørelse om Nationalpark Vadehavet). The government is advised by National park council, that consists of a large group of representatives of e.g. the Wadden Sea municipalities, users of the area (fishery, recreational boating), parties related to cultural history in the area as well as nature organisations and institutions (§1). The council meets four times per a year and the meetings are not open for the public (Förretningsorden §4).

The background for the national park management and guidelines is set in the National Parkplan, a vision document compiled by the government of the National park (Nationalpark Vadehavet, 2019). In the Plan the Wadden Sea is approached through five topics: 1) nature and landscape, 2) culture and culture history, 3) outdoor life, 4) teaching, research, nature and culture communication, 5) communities, profession and tourism. Time range of the document is 20-30 years and it is revised every seven years. The vision document states that it was important to engage the local level in compiling the document. Anyone who had interest in the Wadden Sea was able to leave ideas and suggestions (Nationalpark Vadehavet, 2019: pp. 5). Ideas were gathered when the first vision

document was compiled, and again when the document was revised in 2018 (Nationalpark Vadehavet, 2018). Participants were informed in workshops and other events, by email campaigns and by approaching schools. Additionally, participants could send their ideas via post or email. 800 ideas were collected, and they were grouped according to the five themes of the Vadehavetplan.

Wadden Sea as land-sea interface

Wadden Sea coast is reported to be the first place in Denmark where dikes have been built for protection against the stormy seas, and even today the Wadden Sea dikes have an important role in ensuring safety (Danish Coastal Authority, 2019). Coastal authority is the authority responsible for the coastal protection and infrastructure in Denmark. The dikes are managed by the local dike authorities and the Coastal authority is giving technical advices. After the devastating storm floods in 1976 and 1981 the decision was taken to build the Tonder dike, or the so-called Advanced dike. The advanced dike stretches across the Danish-German border, and it was built as a cross-border project between Denmark and the state of Schleswig Holstein. Also, in general the Danish coastal Authority is collaborating with Schleswig-Holstein in order to maintain the dikes and improve the alarm system. In addition to the bilateral cooperation, Denmark participates in the trilateral cooperation by joining the WSF Coastal Protection and Sea Level Rise Working Group. Coastal protection is a topic that produces Wadden Sea region through land-sea interactions across the national borders.

Wadden Sea as culture region

In Denmark the Wadden Sea region culture history has been included in the Danish culture politics. The Culture Development Agreement was signed between the Ministry of Culture and the Wadden Sea culture region consisting of the four Wadden Sea municipalities (Kulturaftale Vadehavet, 2018). *Kulturaftalen* are tools that connect the national and municipal level in culture questions. In the Wadden Sea Kulturaftalen the aim of the agreement is to highlight the importance of the cultural and natural historical values typical for the Wadden Sea region. Nature values are also mentioned in the agreement to be part of the region's identity. To strengthen the cooperation in the area, Cultural region has started a working group consisting of national park, Vadehavets formidler forum, the Southwest Jutland Development Forum, the Danish Wadden Sea Secretariat and the Wadden Sea Cultural Region. As with the Vadehavetplan regarding to the national park, also with the cultural sphere the public was engaged by collecting ideas of everyone interested. The agreement refers to the shared identity of the Wadden Sea region and highlights cross-border cooperation. There is cooperation with Leeuwarden in the Netherlands, and is seeking for further cooperation with the other Danish culture regions as well as Jylland-Schleswig area.

6.4.2 The Netherlands

In the Netherlands the Wadden Sea comprises areas that are under central governance, governance of provinces and municipalities. The central governance manages the marine areas 1 km from the coastline onwards, while the governance of the first kilometre zone is shared with municipalities and province (Wet regeling provincie- en gemeentegrenzen langs de Noordzeekust van de gemeente Den Helder tot en met de gemeente Sluis en wijziging van de Financiële-Verhoudingswet 1984, 1992). The territorial sea is classified as non-administrative (Wet grenzen Nederlandse territoriale zee), but all Dutch legislation apply within the 12 nm zone. The Wadden Sea is partly defined as *rijkswateren*, national waters, and partly as *regionale wateren*, waters that are not governed by the central governance (Waterwet §1.1). The areas of the Wadden sea belonging to national waters are managed by the Rijkswaterstraat, which is a subdivision of the Ministry of Infrastructure and Water. Rijkswaterstraat supervises topics related to water, coast and nature. In the Wadden Sea tasks are supervising waterquality, implementing the Natura 2000 plan, protection of the salt marshes, accessibility to the islands by maintaining the waterways and coastal protection by bringing sand to the coast. In addition, Staatsbosbeheer manages the recreational and nature topics of the Wadden Sea. In the regional waters the governing bodies are the water boards, waterschappen, who take care e.g. of the dikes, waterways and waste water management.

Regiecollege Waddenzeegebied (RCW) gathers the Dutch Wadden Sea representatives from different regional levels. RCW is a strategic guiding organ that unites the state, provinces, municipalities, water boards, industries, research and nature organisations. There are three Dutch Wadden Sea provinces (RCW, 2012): Groningen, Fryslan and Noor-Holland. Number of Wadden Sea municipalities is 17. The aim of RCW is to connect the different parties and discuss development of the Wadden Sea area from many different angles. RCW is not making legal decisions, but it's a platform for discussions and networking. Both the provinces and the municipalities have their own cooperation structures in addition to the RCW. The Wadden Sea provinces have their organizational organ Stuurgroep Waddenprovincies (SWP), and they have agreed to cooperate on the tasks related to nature protection, recreational use, tourism and mudflat hiking. SWP gathers after the meetings of RCW and discusses items that were discussed there. Background and aim of the SWP are described in the Interprovinciaal Beleidsplan Waddenzeegebied (Provinciale Staten Friesland, Groningen & Noord-Holland, 1995). Wadden Sea islands have their own organisation (De Waddeneilanden) and the coastal municipalities have their organisation (Waddenzeekustgemeenten).

For provinces the cooperation is based on decentralized Wadden Fund agreement, the strategic document Wadden van allure! (2013) and the Wadden Sea Investment framework, Investeringskader

Waddengebiet. The motivation for the cooperation is developing ecology and economy in the region as a whole. Wadden van Allure was the vision document (2013) and the Wadden Sea Investment Framework is meant to be the tool for concrete steps to reach the vision (2016). Wadden van allure! describes the trilateral cooperation as part of the vision. The document refers to trilateral values in landscape section (preserving of the landscape and culture-history and also coastal protection) (p.14). UNESCO World Heritage is mentioned as supporting element of the tourism in the area (p.28).

Wadden Sea and National parks

In the Netherlands there are three Wadden Sea national parks: Nationaal Park Duinen van Texel, Nationaal Park Lauwersmeer and National Park Schiermonnikoog. The latter one is the first national park established in the Netherlands. In the Netherlands national park needs to encompass at least 1000 hectare of undivided nature area that can include water and land areas. The national parks are described as instruments for collaboration that collects the landowners and managers together.

6.4.3 Germany

In Germany the Wadden Sea is situated in the territorial seas that are governed by the states of Schleswig-Holstein, Hamburg and Lower Saxony. According to the administrative structure in Germany, each state has its own governance structures and legislation.

Schleswig Holstein

In the state development plan of Schleswig Holstein (Landesentwicklungsplan Schleswig-Holstein, LEP) the Wadden Sea is mentioned to be part of the state's aims to strengthen its economic position in the North Sea area with different cooperation organs bilateral contracts (LEP, p. 19). Regarding to this, the Wadden Sea is mentioned as one of the cooperation networks and as an opportunity to protect the ecosystem of the North Sea. Das Ministerium für Energiewende, Landwirtschaft, Umwelt, Natur und Digitalisierung has compiled also a Wadden Sea strategy: Wattenmeerstrategie 2100. The strategy was compiled in collaboration with experts, National park, organisations and Wadden Sea Schutzstation. Two important topics in the document are nature protection and climate change related to coastal protection. The aims presented include e.g. securing the cultural space, ecological values and sustainability. The main question asked in the strategy is that how to deal with the climate change and rising sea level in the Wadden Sea in a sustainable way? The main goals presented in the strategy for nature protection and coastal protection are preserving Wadden Sea as a protecting zone from the coastal powers, preserving the islands and Halligen as cultural space for the people, developing and

preserving the characteristics, ecological functions, sustainable development of the Wadden Sea region (including land, sea and estuaries).

The strategy was created in transparent collaboration with a project group and advisory council, which consisted of experts and stakeholders, and it underlines many times the importance of collaboration (p.8, p. 13). In the process the experiences and knowledge of these stakeholders were gathered (p.9). It is stated in the document that the collaboration showed that the cooperation should be continued, and implementation of the strategy should be done through active engagement in the region (p.8). In addition, the strategy points out that the Dutch Wadden Sea strategy was reviewed to get some ideas.

The strategy states that coastal protection and nature protection have different goals, and that usually they are handled as two different things, although at the same time the topics are closely related (3.2). To avoid this the strategy approaches both topics with mutual goals.

Trilateral cooperation is referred in the strategy, and it is stated that the results of e.g. trilateral cooperation on sealevel rise and coastal protection, as well as the cooperation related to spatial planning are integrated in the document. The document refers to trilateral Wadden Sea region as a whole, but also that the region consists of sub regions, namely Denmark, the German states and the Netherlands. The result of the strategy is still divided in sectors of morphology, hydrology and biological approach but it is stated that more integrated multisectoral approach and research are needed, including integration of different functions, activities, nature, interests of inhabitants and tourism (p.74). Mutual data collection methods and evaluation methods are needed.

The National parks have big impact on the spatiality of the Wadden Sea in Germany. National park of Schleswig Holstein Wadden Sea was established in 1985. In strategies and other documents the most important aim of the National park seems to be to preserve the nature in the area as undisturbed as possible. In Schleswig Holstein the Wadden Sea national park has been divided in zones that regulate for what kind of use each area can be pointed. Das Ministerium für Energiewende, Landwirtschaft, Umwelt, Natur und Digitalisierung is responsible for the national park (Nationalparkgesetz = NPG, 1999: §7). Nationalparkverwaltung is responsible for coordinating the protection work and interests, activities, research and projects in the Wadden Sea. It also e.g. monitors the environment in collaboration with the other states. Nationalparkverwaltung works under the Landesbetriebs für Küstenschutz, Nationalpark und Meeresschutz of Schleswig-Holsteinin, which is part of the Ministry of Environment. The counties of Nordfriesland and Dithmarschen are located on the Wadden Sea coast. Counties have their own Nationalpark committees (Kuratorium) that advise and

discuss with the Nationalparkverwaltung on the important issues. Each Committee has 21 member, such as representatives from the municipalities, tourism sector and nature protection (NPG §8).

Lower Saxony

In Lower Saxony there is no separate Wadden Sea strategy document, but the *die Raumordnungskonzept für das niedersächsische Küstenmeer* (ROKK, 2005) refers to the Wadden Sea, mostly to the Nationalpark, related to the different topics represented in the document.

In Lower Saxony the national park was established in 1986 and it is managed by the national park administration. Nationalparkverwaltung Niedersächsisches Wattenmeer part of the Ministerium für Umwelt, Energie, Bauen und Klimaschutz. Nationalparkverwaltung coordinates the protection, management and development of the national park. Like in Schleswig-Holstein, also in Lower Saxony there is an advisory council for the National park Verwaltung, which consists of representatives from the municipalities, nature protection organisations, industrial and economic parties (Gesetz über den Nationalpark = NWattNPG, 2001: §27).

6.4.4 Comparison of the national Wadden Sea approaches

In each of the Wadden Sea states the actual governance and decision-making is a task of higher political levels, but especially in Denmark and in the Netherlands the municipalities and provinces have an active role in producing Wadden Sea space. In Denmark the municipalities form the Danish Wadden Sea Secretary, and in the Netherlands there are cooperation networks for Wadden Sea provinces and municipalities. In Denmark the Wadden Sea regionalisation occurs mostly on the municipal scale, and in the Netherlands on municipal and provincial scale. In Germany the state, *Länder*, have stronger role in regulating the Wadden Sea space and therefore in affecting how the German Wadden Sea region is constructed. In Germany Wadden Sea region is mainly claimed by the states (*Länder*).

Despite the differences in management structures and national cooperation systems, the relevant topics characterizing the Wadden Sea in Denmark, Germany and the Netherlands are similar. The most dominating approach is the nature protection discourse, which regulates other topics. National Parks have a great role in delivering the nature protection discourse in regionalization.

7. PART II: Wadden Sea and MSP

This chapter reviews the national MSP practices of Denmark, Germany and the Netherlands by analysing the national planning frameworks and the status of MSP, and the relationship between the

national MSP and trilateral Wadden Sea cooperation. First part investigates the national MSP systems by reviewing planning documents, strategies and legislations. The second part of the chapter introduces the interview results concerning experiences on MSP practices in the area. The focus of the interviews was to find out about challenges of the MSP and how the Wadden Sea regionalisation is affecting the processes.

7.1 The national MSP strategies

7.1.1 MSP in Denmark

Denmark does not have an existing MSP yet, however the first MSP is currently being compiled, and the entry into force is expected to be in March 2021 (Danish Maritime Authority, 2017). Spatial planning in the Danish maritime areas is based on the Act on Marine Spatial planning in (Act 615, 2016) which was adopted in 2016. The planning process was started in January 2017 (Danish Maritime Authority, 2017). The responsible authority for the MSP is the Danish Maritime Authority, which is an authority under the Ministry of Business and Growth. The plan is compiled in collaboration with a working group consisting of 12 maritime authorities. The Danish marine areas, both EEZ and territorial waters are classified as non-administrative, which means that they are managed by the central government (European MSP Platform, 2019). However, in the territorial sea the Coastal Authority exercises sovereignty over the coastal zone management, including coastal protection and solid constructions such as cable installations and marinas in the territorial waters (Kystdirektoratet, 2019). Also, municipalities and local authorities have rights to their adjacent coastal waters. The new MSP will apply to EEZ, territorial sea and marine internal waters, and it will be one plan including the North Sea and the Baltic Sea waters (European MSP Platform, 2019).

So far, the Danish marine areas have been occupied with numerous sectors, such as energy, maritime transport, extraction of raw materials fishing, and each sector has been managed by separate, sectoral acts (European MSP Platform, 2019). The aim with the Act on Marine Spatial Planning is to compile an integrated plan. The act supports blue growth and sustainable development and use of the marine areas and resources. The first plan proposal, which is currently under review, suggests three categories or zones for the marine areas (European MSP Platform, 2019): a general use zone, reserved development zones and zones excluded from the Danish MSP. General use zones would compile the default zones for all marine areas, including any type of activities without fixed constructions or structures, such as recreational boating, tourism and fishing. Reserved development zones are planned to include areas that are under consideration to become zones for the sectors. Finally, zones excluded from the Danish MSP include the coastal waters that are under the jurisdiction of the municipalities and local authorities, and areas used by military or national security. It means that the municipalities

have a special role in the MSP process. The municipalities are excluded from the plan and they can continue their activities at the coast.

7.1.2 MSP in Germany

In Germany MSP is divided on two levels: state level, which comprises the regional seas from the coastline up to the 12 nm zone, and national level, which comprises the EEZ starting from the 12 nm zone. The body responsible for MSP in the German EEZ is the Federal Ministry of Traffic and Digital Infrastructure, in collaboration with the needed ministries and Federal Maritime and Hydrographic Agency of Germany (BSH). MSP on the national level is based on the General Spatial Planning Act, Raumordnungsgesetz (ROG §17), which defines the tasks, principles and requirements of spatial planning in Germany. It aims at environmentally, economically and socially balanced spatial development (ROG §1). In the 1§ it is stated that the German EEZ is also included in the regulation and it should be developed according to the same principles as the land areas. The tasks of the MSP in the German EEZ according to the ROG are to ensure land-sea interactions and safe maritime traffic (ROG §17). ROG was made applicable to the German EEZ in 2004 (ARL, 2013).

Germany is a federal state consisting of 16 states (*Länder*) that have self-administration including parliaments and legislation (Grundgesetz, Art. 28, Art. 30). Due to the strong role of the states, the governance and planning in the territorial seas, the 12 nm zone, has been left to the states; Lower Saxony (North Sea), Schleswig-Holstein (North Sea and Baltic Sea) and Mecklenburg-Vorpommern (Baltic Sea) (ARL, pp:22). In this thesis I concentrate only on the North Sea states, Lower Saxony and Schleswig Holstein. The legal basis of MSP on the state level is provided by ROG and the spatial planning law respective of each state. The coastal zone was extended in 1994 to comprise 12 nm (DtKüstmProklBekant, 1994). On state level the marine spatial plans have been integrated with spatial plans of the coastal states.

Lower Saxony

Lower Saxony is responsible for the 12 nm zone bordered by the Netherlands in the west and by the state of Schleswig Holstein in the east. Territorial seas of Lower Saxony comprise 7 islands, the land zone, the Wadden Sea and the offshore zone. In Lower Saxony planning is based on the spatial planning programme of Lower Saxony (Landes-Raumordnungsprogramm Niedersachsen (LROP), 2008). Based on the recommendation of the EU for coastal management (EU 2002/413) Lower Saxony adopted a concept for the spatial planning in the coastal waters (Raumordnungskonzept für das niedersächsische Küstenmeer, ROKK, 2006). The concept itself is legally unbinding, but it's based

on LROP. The idea of ROKK is to give recommendations and information for the stakeholders, and to form the basis for the ICZM in Lower Saxony. The central aim is to guide the governance and use of the coastal area in a sustainable way. In 2006 the ROKK was taken into account while writing the LROP, and in 2008 an own chapter of the coastal waters was added (Nds. Ministerium für Ernährung, Landwirtschaft und Verbraucherschutz, 2018). One highlighted point is the land sea interactions, which is visible also because the MSP of Lower Saxony has been integrated with the land use planning policy. LROP refers to the principles of ICZM by adjusting sustainable development, participation, communication and taking to account all sides (LROP 1.3: pp.9). Regarding to the coastal area and the Wadden Sea, important themes are the coastal protection (LROP 03: p. 10) of the East Frisian islands and the coast, protection of the marine living environments, and the national park of the Wadden Sea. Further on, tourism, habitants on the islands, safety of maritime traffic and harbours, wind energy plants and the cables are topics that concern the Wadden Sea.

Schleswig Holstein

In Schleswig Holstein the fundament for spatial planning and the regional plans is built on Landentwicklungsplan Schleswig-Holstein 2010 (LEP). MSP is based on the LEP and Raumordnungsbericht Küste und Meer (2005). MSP is stated to be an important approach, because the usage of the seas is getting more intense. There is potential in the coastal seas and zone, and it should be developed sustainably (pp. 25). Topics that concern the use of coastal seas are marine traffic, energy production, tourism, nature protection, coastal protection.

Coastal protection is mentioned to be an important part, not least because of the climate change and rising sea level (pp. 17). Schleswig Holstein also wants to profile itself as “Maritime model region in Europe” (pp. 18), meaning that the expertise and activities in the maritime branch will be promoted. This includes i.e. research, fields related to maritime traffic, spatial planning and fishery. Further, the state wants to strengthen its position in the North Sea area by taking part in collaborations between neighbouring countries, other countries as well as the networks of the Wadden Sea, peripheral coastal regions and the North Sea cooperation (pp.19).

German MSPs are illustrated in the following maps. The plan for the German EEZ is presented in the Figure 11. Central aspects of the MSP in EEZ are the shipping lanes, the traffic separation scheme that was required by IMO when the Wadden Sea was nominated as a PSSA. The blue lanes in the plan show the main shipping routes that are being used in order to avoid accidents nearby the Wadden Sea. The green areas in the eastern parts of the EEZ are Nature 2000 areas and research areas. In comparison to the plans in the territorial seas (Figure 12 and Figure 13) the area of nature protection

is smaller. The nature protection discourse of Wadden Sea regionalisation is visible in the plan documents as well. The Wadden Sea has been pointed out as protected area almost completely, which limits other uses in the territorial sea. Therefore activities such as energy production and extraction of nature resources have been concentrated in the EEZ.

MSPs of Lower Saxony (Figure 12) and Schleswig-Holstein (Figure 13) have been integrated with the regional land use plan. This means that the territorial seas have been juxtaposed with land as an extension of the land territory. The plan of Lower Saxony shows also in transparent colour the neighbouring plans: MSP of EEZ, regional plan of Schleswig-Holstein and the Dutch plans.

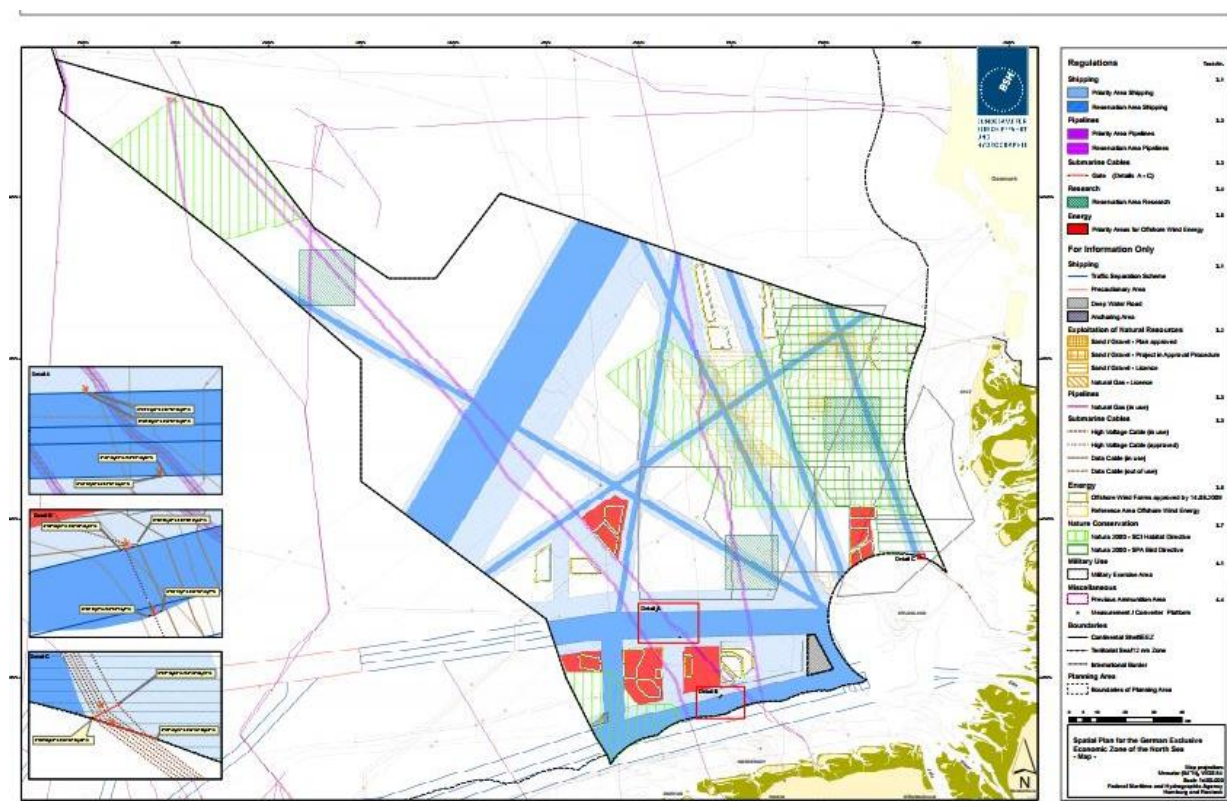


Figure 11 Marine spatial plan for the German EEZ (Federal Maritime and Hydrographic Agency, 2009).

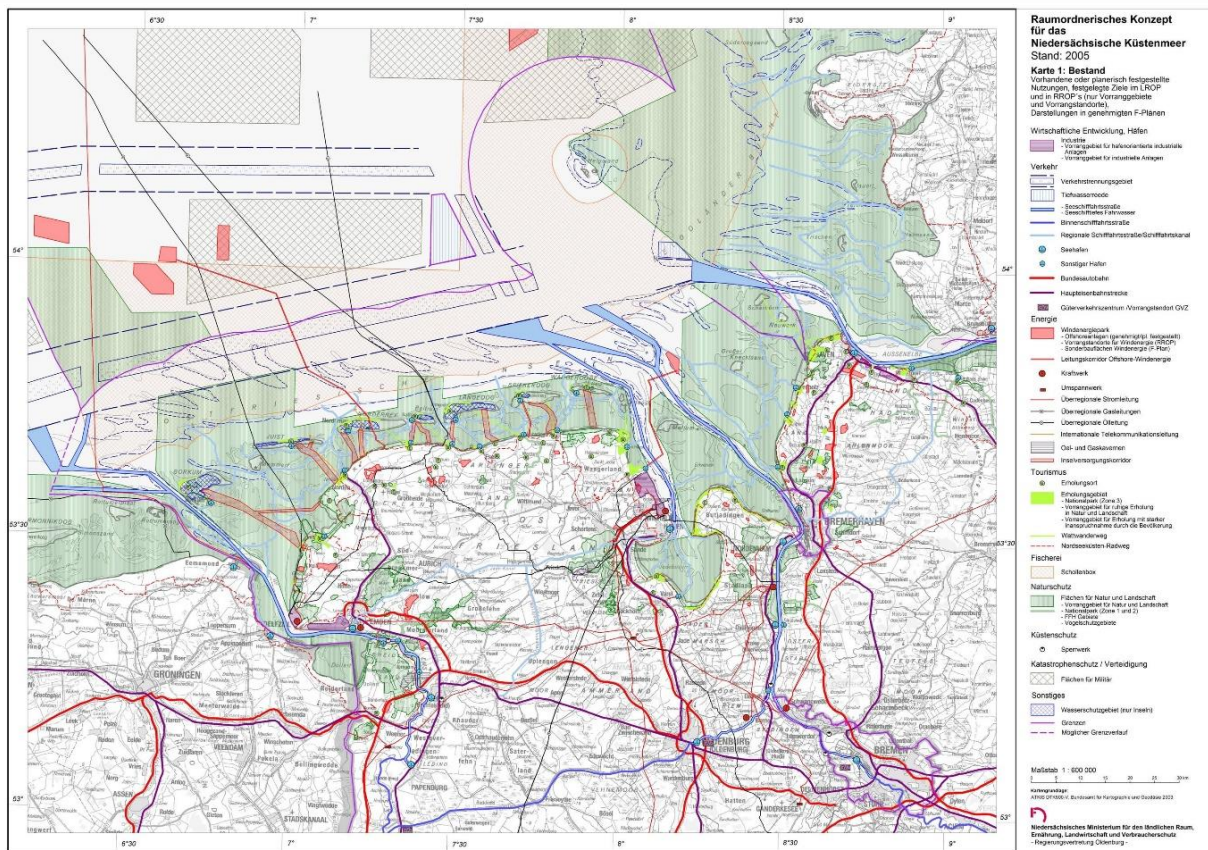


Figure 12 Capture from the Regional development plan 2005 of the state of Lower Saxony (Niedersächsisches Ministerium für den ländlichen Raum, Ernährung, Landwirtschaft und Verbraucherschutz, 2005).



Figure 13 Capture from the Regional development plan 2010 of the state of Schleswig-Holstein (Innenministerium des Landes Schleswig-Holstein, 2010).

7.1.3 The Netherlands

The maritime boundaries of the Netherlands were set in contract with Belgium, Germany and the Great Britain in 1958 (Noordzeeloket, 2019). The Dutch EEZ beyond 1 km from the coast belongs to jurisdiction of central government, while the first kilometre is shared with municipal and provincial authorities (Wet regeling provincie- en gemeentegrenzen langs de Noordzeekust van de gemeente Den Helder tot en met de gemeente Sluis en wijziging van de Financiële-Verhoudingswet 1984, 1992). The territorial sea is classified as non-administrative (Wet grenzen Nederlandse territoriale zee), but all Dutch legislation apply within the 12 nm zone. The territorial sea is divided in zones bordered by 1 nm (the border for Kaderrichtlijn water), 3 nm (not really in use anymore, was the border of the TS until 1985 and the extension. Dutch and Belgians are allowed to fish there according to the Benelux contract), 6 nm (fishing area of certain species for NL, LU, BE, DK, DE), 12 nm (fishing area of certain species for NL, LU, BE, DK, DE and GB) and 20 meter line (the border for kustfundament, the coastal foundation). Coastal foundation is an area for preservation and protection, i.e. dunes and the beach. Outside of the territorial zone only specified legislations apply (Noordzeeloket, 2019). The EEZ is divided in segments for the sake of exploration and exploitation of oil and gas, this is regulated in the mining regulation. The segments are identified by letters and numbers.

The Dutch Ministry of housing, spatial planning and the environment included a chapter about the North Sea in the National spatial planning document in 2005, which was followed by the integrated management plan for the North Sea 2005-2015. This version was more of an analysis of the opportunities of the sea uses. Based on that, more strategic document, the marine strategy of the Netherlands, The Policy Document on the North Sea 2016-2021 (Ministry of Infrastructure and Environment, 2012), includes the actual marine spatial plan on a map and vision (Figure 13). In the Netherlands MSP is implemented only on the national level. The scope of the planning area extends to the whole EEZ and territorial seas. The responsible body for marine spatial planning is the Dutch Ministry of infrastructure and environment, and the policy framework is based on the National Water Plan (Ministry of Infrastructure and Water management, 2015).

The legal basis for MSP is defined in the Water Act (Waterwet) and the Spatial planning act (Wet Ruimtelijke ordening). The policy document for the North Sea is not a legal document but it's based on the General Administrative Law Act 3.4 (Algemene wet bestuursrecht) and 4.1 Water decree (Waterbesluit). Content of the Dutch MSP includes priority for oil and gas extraction, shipping, sand extraction, renewable energy. Special attention is paid on the coastal foundation, programmes for the

Wadden Sea region, Natura 2000 site as well as the landscape up to 12 nm, pipelines and archaeological sites (msp platform).

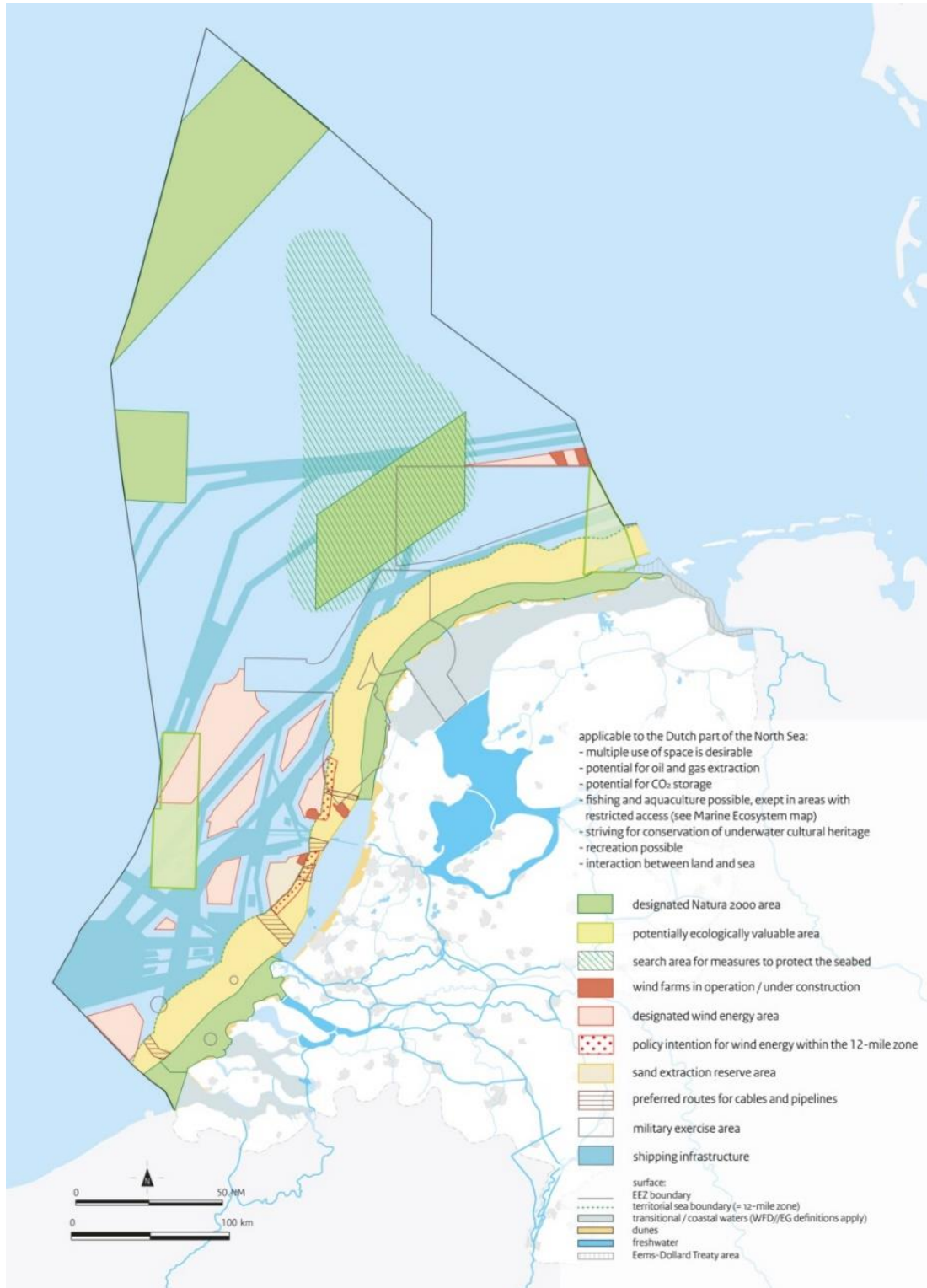


Figure 14 Integrated maritime spatial policy map of the Netherlands (Ministry of Infrastructure and Environment, 2012).

	Denmark	Germany	The Netherlands
Governance of maritime areas			
Territorial seas	Public	States	Non-administrative
EEZ	Public	State	Non-administrative, until 1 km municipalities and provinces
Local authorities have a role in the governance			
	Yes	No	Yes
Status of MSP			
Regional level	-	x	-
National level	In progress, expected to enter in force in 2021	x	x

Table 3. Comparison of the marine spatial planning practices of Denmark, Germany and the Netherlands.

7.2 Trilateral Wadden Sea cooperation and MSP

In the trilateral cooperation ICZM and MSP are referred to as tools to pursue sustainable management and use of the Wadden Sea area, and it is pointed out that the national practices should be conducted in a coherent way. Trilateral cooperation encourages to cooperate in MSP and ICZM related issues. Mostly spatial management issues are referred as ICZM in the documents, as the Trilateral ICZM Strategy sums up:

“Maritime Spatial Planning (MSP) as an instrument in Integrated Maritime Policy (IMP) follows principles similar to ICZM. MSP and ICZM can therefore be combined in the strategy for the Wadden Sea Region.” (WSF, 2013).

The joint declaration 2010 sets the objectives for the trilateral cooperation and on an abstract level describes how they should be achieved. As the Joint Declaration is a higher-level guiding document signed by the governments of the Wadden Sea countries, it does not describe in detail how exactly the aims will be implemented. ICZM is mentioned twice, first in the beginning of the document by declaring that governments recognise the need for ICZM, and later in section 4: *Areas of cooperation*

by stating that the governments will apply ICZM in order to pursue the set objectives (§4c). Indirectly the document refers to aspects and approaches relevant for ICZM, such as addressing multiple topics that are relevant across the border, coordinated and consistent management (§4b), involvement of the stakeholders and taking measures to monitor and evaluate the implemented actions. In the Leeuwarden declaration (2018: Point 38) ICZM is mentioned by stating that the cooperation should encourage WSF, the Green NGOs and other stakeholders to continue pursuing sustainable regional development and ICZM.

Wadden Sea Plan

The Wadden Sea plan (CWSS, 2010), which is the document underlining the framework for the trilateral management of the Wadden Sea, describes the relevant topics and actions for the Wadden Sea more detail. Idea of the Wadden Sea management in the Plan is widely based on the EBM. The document sets more concrete alignments on how the Wadden Sea countries can achieve the visions of the trilateral cooperation. The Wadden Sea Plan has a strong role in producing the Wadden Sea as an area. ICZM is mentioned multiple times and it is described as a concept that the Wadden Sea countries have been implementing on national level as a consequence of the recommendation by the EU (2002/413). In the Plan it is stated that the Wadden Sea countries have agreed to implement their ICZM in a coherent way by consulting each other and the WSF (CWSS, 2010). ICZM is described as one of the tools to apply EBM among the zoning and the Man and Biosphere (MAB) approaches. In §1.6.2 it is stated that ICZM and sustainability indicators will be one of the objects of further improvement as topic of trilateral policies.

Among MSP and ICZM the term spatial planning is also used in the Plan referring to both, marine and terrestrial areas. The section about climate change describes that there is a trilateral working group on Coastal Protection and Sea level Rise, and that since 2005 spatial planning has been a topic included in the group. Living conditions and safety of people, landscape, cultural heritage as well as ecological sustainability are spatial planning related topics that are suggested to be integrated. In addition, stakeholder engagement and communication about the planning process are listed as important aspects of this development. The topics mentioned in the Plan derive back to nature protection. In §2.3.2 Spatial planning is highlighted as an important approach to ensure shipping safety in the EEZs close to the Wadden Sea, and the Wadden Sea plan suggest that it's one of the focus areas to take actions on. The Plan lines that the shipping safety should be kept at least on the same level as currently, regardless of the future developments and uses of the offshore areas. The negative impacts of tourism and recreation are suggested to be reduced by spatial zoning as trails, routes and no-go zones (§3.8, §4.31, §5.6).

WSF coordinating the trilateral ICZM cooperation

Trilateral ICZM cooperation is coordinated by the WSF. WSF organizes the Trilateral Working group on ICZM, which brings together different stakeholders from the Wadden Sea countries, such as representatives of different regional levels, research institutions and the relevant sectors. The group meets a few times per a year and discusses the developments and projects regarding to ICZM and the Wadden Sea. However, WSF is not responsible for integrating policies or planning practices. In the end the responsible parties for this are the national and regional governments of each Wadden Sea country.

The trilateral ICZM strategy of the Wadden Sea includes general objectives for social, economic and ecologic sustainability (WSF, 2013). The strategy for coastal and marine areas of the Wadden Sea is based on the strategic report “Breaking the Ice” (2005), which presented the first steps towards integrating the national ICZMs. Objectives of the ICZM strategy presented in the document aimed at integration of the sectoral strategies as well as the interactions between mainland and the sea, intensifying the cooperation of different authorities on different levels, and simplifying the rules and regulations. Back in the days the working area consisted of the Wadden Sea and the adjacent mainland, flexibly integrating also some off-shore areas. Later, when the use of the off-shore areas, such as shipping, mining and energy production increased, the trilateral EEZs were included in the working area.

WSF has supported the coordination and harmonization of the national ICZM and MSP strategies by creating the Wadden Sea Region Planning Portal in collaboration with Die Küsten Union Deutschland e.V. (WSF, 2016). It’s an interactive online GIS tool where spatial data on different topics from Denmark, Germany and the Netherlands can be layered on a map. The portal includes information of existing and planned activities in the area. This tool could potentially solve many challenges related to transboundary planning interactions, such as difficulties of finding datasets and having datasets in the right format. From the perspective of good governance this kind of information sharing also supports transparency and data accessibility, and hence supports regionalisation of the Wadden Sea as a space of planning. However, according to some of my interviewees (in the next chapter), in reality the planners don’t utilize the tool at its’ full potential, because they use their own data.

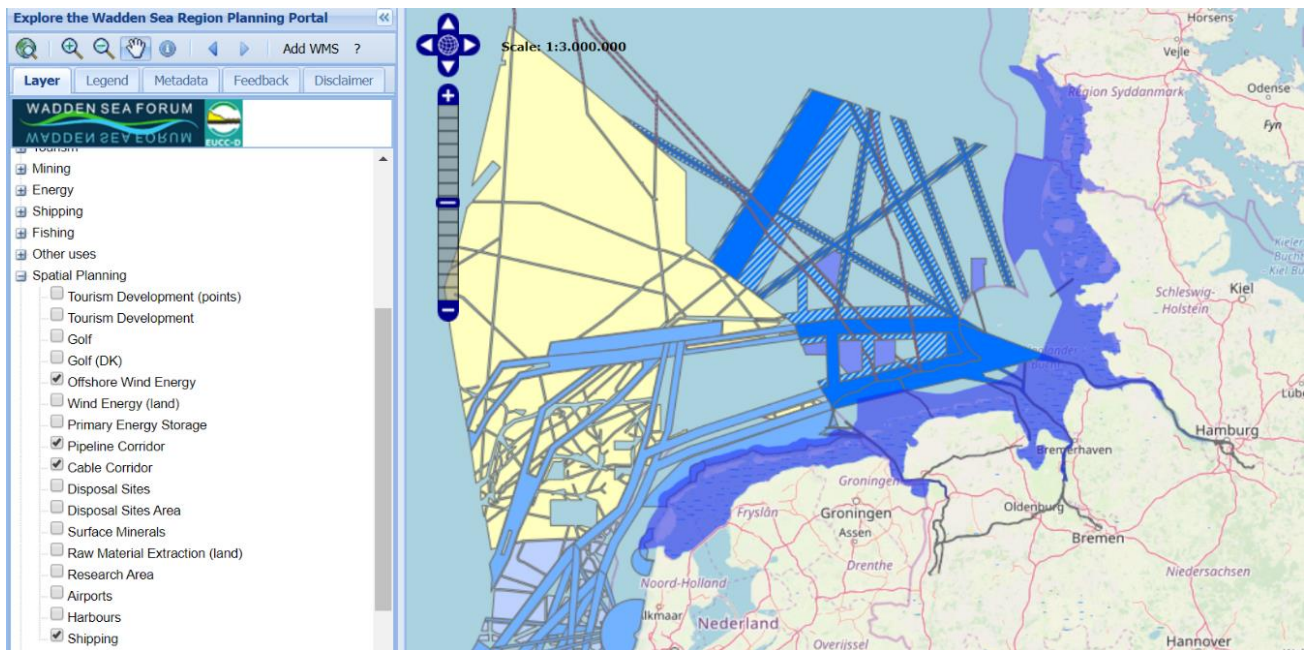


Figure 15: Wadden Sea Region Planning Portal is an interactive online tool where spatial data from the Wadden Sea countries is illustrated as map layers regarding to different topics (WSF, 2019)

8. Perceptions of the Wadden Sea regionalisation and MSP developments

This section introduces the results of the semi-structured interviews that were conducted in order to gain deeper understanding of the national MSP approaches in relation to the Wadden Sea. The results are presented here in two sections. First, how did the interviewees perceive the sea as a space of planning, and moreover, how is the Wadden Sea situated in this. Second, how did the interviewees evaluate the aspects of marine regionalisation (cooperation, integration and governance principles) regarding to the MSP processes.

8.1 Perceiving marine space

As one of the first questions the interviewees were asked to describe their spatial perceptions of sea. This question brought some valuable information, but in fact the spatial elements of sea were present throughout the whole interviews. In the following I have recognized the different elements that based on the interviews, construct the marine space in the research area, and how these are present in the MSP reality. While forming a general picture, one of the main points was to test how according to the interviewees the Wadden Sea space relates to the general marine space.

8.1.1 Dimensions and territories in the marine space

Inevitably, when working in the field of spatial management, the physical space is present. Interviewees pointed out the absolute dimensions of marine space in which different activities can be allocated. One of the characters that makes seas special according to the interviewees is the three-dimensional structure of the marine space: surface, water body and the bottom, and all of them offering potential spaces for activities. This structure was mentioned also as the factor that makes the difference between marine space and terrestrial space more visible.

“There are more dimensions in the sea. In the land you have normally two dimensions, x and y, in the sea there is also z.”

Interviewee 5, The Netherlands

Furthermore, according to the interviewees one of the typical aspects of the marine space in comparison to land is the lack of landmarks and physical boundaries. On land there are elevations, rivers and mountains, but at the sea such things don't exist. At the open sea everything looks the same above the surface, only closer to the coast islands and coastline determine variation. This affects for example on defining the territorial boundaries, as territorial limits are more difficult to perceive because they cannot be seen nor defined by landmarks. The property rights are different at sea than on land. There are no properties, nor other land ownerships by private persons or companies.

“The sea itself has no limits, no boundaries when you look at, there are borders in the sea, i.e. between Denmark, Germany and the Netherlands, but the sea itself has no borders”

Interviewee 4, Germany

When it comes to the Wadden Sea, there were mainly two types of recurrent answers: physical factors and trilateral cooperation. On the other hand, it was perceived as an area that is defined by the extent of the intertidal zone, which is distinguished from the North Sea by the tides and the islands. It was mentioned that it's a special area, because due to the tides, it's partly sea and partly land. The interviewees attached the ecological values as a solid characteristic of the Wadden Sea that differentiate it from the rest of the world. From the more abstract point of view the respondents saw the trilateral cooperation as a factor defining the area. Management of the Wadden Sea was seen as a very complicated structure. First, within each Wadden Sea country there are different administrative levels, and a high number of actors. In each of the countries it varies which of the governmental levels has the strongest role, be it the central governance, provinces in the Netherlands, the municipalities in Denmark and the states in Germany. In addition to the administrative levels there are the sectors, such as the fishers, energy field and nature protection that have stake over the Wadden Sea as well.

Finally, the Wadden Sea is a transboundary area, and the administrative levels and sectors should be brought around the same table.

8.1.2 Space of activities

Interviewees described seas as wide spaces, where there has been place for different kinds of activities, and it has not been necessary to plan the allocations that carefully because the use has not been so intensive. However, the interviewees stated that the seas are becoming more important and pressures are increasing. Activities at sea are spatial claims, while each activity requires its own space to function, be it for example fishery, sand grabbing or mining, nature protection or energy production. As the activities are getting more intense and require more space while the interests increase, there is a lot of pressure to manage the overlapping interests spatially. With increasing number of interests to utilize the marine space it is necessary to compile MSP to organize the activities in safe and efficient manner. This is one aspect of regionalization processes at sea: instead of seas just being plane areas where there are none or a few human activities taking place, the seas have become more complicated spaces, where intensifying activities create more complicated structures and require more complicated management.

“In Denmark we have a lot of sea, so maybe it’s not, we haven’t had it (MSP) before, and maybe that’s because we have so much sea. There has been room for whatever people would like to use the sea for.”

Interviewee 1, Denmark

“I think they become more and more important from a lot of point of views. Let’s say in 1700 it was only a water way for shipping and perhaps for fishery. But today we have a lot of interests, we have to see climate change, we have to see the water body of the sea, so you have a lot of levels which goes over and over, and you have to decide which interests are important at what time”

Interviewee 2, Germany

On the other hand, it was articulated that mankind is more absent at the sea than on land. Therefore, it has been easier to allocate activities at the sea further away from the coast, such as wind farms, that often face a lot of resistance by the residents. There the likeliness of objecting attitudes by residents towards the plans, the so-called NIMBY (not in my backyard) that usually take place in the public participation processes, are less likely to take place.

The time scope of the activities at sea was mentioned to be different than with the terrestrial activities and structures.

“Most activities in the sea are temporary. On land it’s much more longer if you build a city, it’s not going away for a few hundred years. And at sea if you build a platform it’s 25 years max.”

Concerning the Wadden Sea, the interviewees mentioned recurrently nature protection as being the most characterizing activity or spatial claim in the area. Protection of the unique ecological values of the area affects strongly on other activities in the area. For example, fishery, building windmills and laying cables are regulated due to the nature protection. The other important activity taking place in the Wadden Sea area is recreation and tourism, which was seen as one of the factors that unifies the areas of the three Wadden Sea countries and describes the area as a whole. Recreation use, too, is affected by the nature protection regulations for example by restricting the areas where it's allowed to move. Also, the landscape was mentioned repeatedly, i.e. related to the wind mills there is a set distance how far the wind mills need to be built so that they don't disturb the view.

8.1.3 Land-sea interactions

The interaction between the land and sea was present in the interviews in many forms. There are a lot of activities that interact between land and sea, and this topic is essential from the Wadden Sea point of view, as it is an area situated between land and the open sea. Regarding to the Wadden Sea, all these interactions include the ecological link that needs to be considered, such as by limiting where activities can be allocated, at what time of the year and how often in order not to disturb i.e. the bird species. For instance, the cable routes have been considered carefully and there are limitations how much of them and where they can be built. Energy sector and everything connected to that was the most often referred topic related to land-sea interactions. The topic does not only include the allocation of the actual windfarms, but also how to transfer the electricity to the mainland and attach it in the infrastructure? When new wind energy is being built, storing place of the equipment is needed on land, and the personnel needs to be transported to the location across the sea. As mentioned earlier, landscape, or seascape, is an important topic regarding to the tourism and residents in the area. There are requirements to build the windmills far enough in order not to disturb the view too much from the land. In larger scale the whole question of energy consumption affects the land-sea relationship: increasing energy consumption and on the other hand the need for new solutions to replace coal and nuclear energy, are the very reasons why energy production is more and more being transferred on the sea. Transportation, such as shipping is a topic that is very clearly referred as land-sea interaction: on one hand the vessels are moving across the sea, but on the other hand it requires infrastructure on mainland, such as harbours and transportation infrastructures, as well. Sea offers opportunities for extracting construction material, such as sand, and sometimes it's beneficial or even essential to use this resource for building houses and infrastructure on land, as one of the interviewees described:

“So yes, there is an influence between the land and sand mining at sea, also for raising the roads in the municipalities. For new living quarters you need sand, we don’t have that much sand in our mainland so we bring it from the sea” Interviewee 4, The Netherlands

Land and sea meet at the coastline that is the natural point of interactions. Sea alters the coast by targeting the power of waves and wind at it. From the human point of view this is not completely unproblematic, and often coastal protection efforts are undertaken. For example, in the research area dikes and other coastal protection constructions are securing the land from floods and preventing the losses of coastline for example when the storms attack. The material, i.e. sand, for these constructions, such as the dykes, is often extracted from the sea. In global scale the climate change is making the risks of extreme weather conditions higher and this needs to be taken into account in the Wadden Sea region as well. Sea level rise in combination with increasing likeliness of extreme weather conditions project new kinds of threats for the coastal activities and people living in the area and these risks need to be taken into account.

Land-sea interactions are both direct and indirect, and as the utilization of sea is intensifying, land-sea interactions are intensifying as well, and hence the connection between land space and sea space is becoming stronger.

8.2 Cooperation

In the marine governance framework Soma et al (2015) describe cooperation as consisting of four sections: 1) interactivity among different actors, 2) reciprocity in behaviour linked with social norms, 3) leadership and communication skills and 4) developments of partnerships and shared visions. In the following analysis, the interview results are reviewed by using this division.

8.2.1 Interactivity among different actors

The purpose of this section is to introduce the interactions that take place in MSP processes in the research area on different levels and compare interactions on the national level with the interactions on transboundary level. From interactivity point of view the task of the interviews was to find out what are the interacting parties and the forms of the interaction.

Interactivity within the national level

The interviewees named numerous fields and actors that are included in the MSP processes. According to the interviews, the national planning level includes the most interactions by inviting everyone to give ideas and opinions, while on the transboundary level the discussion was mostly told to be led by certain authorities between whom the discussions are taking place across the borders.

The interviewees represented different countries in the research area, and the modes of operation regarding to cooperation were slightly differing from each other, although in general the idea was very often similar. The differing national practices derive back to the issues of territoriality and governance presented in the previous chapter: each country has pointed slightly different authorities to govern each maritime area. In Denmark the sea is governed as a whole by the state, in Germany the governance is divided on federal state and länder, while in the Netherlands the sea is governed by the state, but the first kilometre zone is divided with the provinces and municipalities. This affects on who is the responsible organization to coordinate the cooperation. In the Netherlands and in Germany the MSP tasks are concentrated under responsible ministries, while in Denmark all ministries are involved, and each topic of interest is handled through the right ministry.

Interviewees described that the actors and stakeholders are invited to participate in workshops, meetings, steering committees and public plan consultations. There are meetings for the higher level that take place a couple of times a year. In between smaller meetings and workshops are being organized to work more in depth.

The interviewees divided the MSP interactions on two directions: interaction with the administrative levels and interaction with the different sectors. Administrative levels included all levels of state, provinces, municipalities and other local authorities. Concerning the Wadden Sea the municipalities especially on the Frisian islands were mentioned to be important stakeholders in MSP as they are bordering the area, and they are part of the cultural heritage of the area and have a lot of interests towards the area. As sectoral actors there are authorities and stakeholders from multitude of fields, such as fishery, shipping, environment, energy field, archaeology and so on. The fields are represented by both governmental and non-governmental organizations. There is also cooperation with the research field, for example with universities and other research groups. Regarding to the Wadden Sea there are local authorities in each country concerning the national park administration, environmental topics that are mostly organized by the ministries of environment, and also NGOs.

Some of the interviewees pointed out that they are involving stakeholders already in the early planning phase, i.e. by publishing and sharing the planning intentions already before the actual planning process. This way the stakeholders will have a rough idea of what will be planned and it will be easier for them to participate. During the planning consultation process is taking place, where stakeholders have the opportunity to share their views. Some use online platforms for commenting. Sometimes it might be a smaller area, it's not necessary about updating the plan for the whole sea area. It might also be a project, such as infrastructure project, that connects the land and sea, such as bridge or airport.

Based on the interviews, there are elements of both, strategic and communicative cooperation within the national level. Strategic cooperation is based on negotiation, where each stakeholder have their pre-set goals and preferences for the outcome. In planning processes the stakeholders often have their own interests and want to pursue these goals. For example, different sectors, such as energy production, shipping and recreation have their own ideas and needs for their that define how they would like to organize their activities. On the other hand this is also regulated from top-down direction, from the higher level, when for example political decisions frame up the use of space: such as the decision to grow the percentage of the wind energy production.

“And then we are reading all statements, we are looking which are the arguments, and we try to reply the arguments. If a statement brings something new what is relevant for the planning but what we didn’t know or consider so far, we are going to incorporate it in our plan – something like that.” (Interviewee 2, Germany)

Communicative form of cooperation is based on deliberative interactions, where stakeholders exchange their arguments and the common goals are formed during the process. The interviewees listed a large crowd of different fields, institutions, organisations and administrative levels that are included in the planning process. The form of the interactions is negotiative, while all are heard and all comments are taken into account, it is in the end up to the planers and the higher level, if these wishes can be integrated in the plan.

The interactions do not only concern the plan contents, but also the ways how the cooperation is organized and institutions built. The researched countries are developed in sense of MSP, but it’s still a rather new topic, and it’s still searching for its’ form of best practices. According to the interviews the MSP processes are very open to new suggestions of the ways how the cooperation could be organized. The actors can decide how they want to express their comments (on site or online), how intensively they want to participate (all meetings or just informing groups), and also express their opinions on how they think the participation and information sharing should be organised.

“We are having workshops and we have been visiting them (municipalities) to see how they are planning today and what kind of system they would like us to make, because we have to make a new platform somekind of solution where we put the plan on, and we are asking them what kind of wishes they have.” (Interviewee 1, Denmark)

Mostly the interviewees didn’t think that it’s possible to involve more stakeholders or sectors. They concluded that they already are open for everyone and that it’s important to stay open and invite

everyone to join the discussion. A few mentioned that with fishery sector it would be beneficial to get more input.

Interactivity on transboundary level

Concerning transboundary interactions related to MSP processes the interviewees referred mostly to EU projects and plan consulting with the neighbouring countries as ways to cooperate. Regarding to the EU projects, interviewees referred to international projects in a wider scale, not specifically the Wadden Sea. Wadden Sea interaction were mostly referred as the trilateral cooperation and through plan consultation across the borders.

All interviewees told that the neighbouring countries are heard in the planning process. There were differences in who can participate, some mentioned they are consulting only institutions or fields across the boundaries, and not individuals, while at least on the German state level it was mentioned that even a lay person is allowed to comment. The neighbouring countries can comment on planning drafts, share their opinions about what works and what does not work in the plan. Those opinions are discussed and taken into account in a negotiative way: how to organize the plan in a way that neither of the parties is at disadvantage? This works in the other direction as well: the plans of the neighbours are taken into account: it does not make sense to plan activities on one side of the border, if there are activities on the other side that don't fit together, such as shipping and windfarms.

“As we drafted our plan we met with the Dutch colleagues and said ‘okay, let’s have a distance to offshore windfarm area and the traffic separation scheme of 2 nm + 500 meters safety zone’. And the Dutch colleague from the traffic agency said ‘oh, that’s a bit too much don’t you think? We could have a smaller distance.’ Then we said ‘well, let’s be on the safe side, let’s have 2 nm and 500 meters.’ The Dutch colleague said okay, agreed, good idea.” (Interviewee 3, Germany)

Some of the interviewees described the transboundary interactions to be deliberative processes as well. The background for this lies at the differences between different countries' systems to manage and plan sea areas. Some of the interviewees mentioned, that this can be a richness as well: one can learn from each other when seeing how the others are organizing the process. The ways how this learning may happen was mentioned to be through the plan consulting, when the other party is presenting the drafted plan, and the other party sees how they are going through the project and what kind of solutions they have done. For instance by the time of the interview Denmark was in the middle of the planning process of the first MSP plan, and it was mentioned in the interview that they are happy to see how the others have done it, and maybe this could bring some good ideas to be included

in the plan. In larger scale many interviewees mentioned the MSP platform by the EU where all EU countries are sharing information about their MSP practices and solutions. This enables countries to share experiences and learn from each other. Concerning different sectors, the cooperation was mentioned to be mainly implemented through EU projects, such as Interreg

8.2.2 Reciprocity refers to social norms

Cooperation is something that occurs through human interrelations, which means that aspects of power, social norms and rationalities are always involved.

Reciprocity on national level

As within land-based spatial planning, also in MSP the planning institutions follow certain norms and procedures, such as governmental structures and norms and rules defined by them. For example, the institutions are demanded to be coherent and trustworthy with their plans: it's not possible to come out with all drafted ideas, because the institutions need to be able to stand behind their words and plans. On the other hand this sets also restrictions to the process: who can be included in the process and how transparent it is. Similarly, in for example Denmark the actors were welcomed to send feedback, but due to the rules, all the comments were needed to go through the right authority, ministry.

“Planning is always controversial. And ministry has to stand up for whatever they publish and they want to make sure they know beforehand what is going to happen and they can support that too.” (Interviewee 3, Germany)

Reciprocity on transboundary level

Interviewees referred recurrently to the EU regulations by describing them as rules that ensure the transboundary cooperation. EU sets the norms for compiling coherent MSPs by 2021, and that this should be reached by consulting the neighbouring countries. The interviewees were quite happy with the current procedures, and all in all they didn't see that there could be much to improve. They concluded that sometimes it could be beneficial to meet more often to exchange views, but on the other hand it might not be that efficient in the end, especially because the time of the extra meetings is time away from other work. Also scheduling with many people is difficult. Few interviewees mentioned that transboundary early stage consultation is something that could be improved within the revisions of the MSP to get the views and opinions as early as possible.

8.2.3 Leadership and communication

Leadership and communication refer to skills and working methods to bring the conflicts visible in order to discuss about them together and work on them. Here the respondents referred that it's important to bring everyone around the same table to make everyone see other points of views, trying to make them understand each other. Interviewees told that everyone has been invited to leave their opinions in the MSP process. This way the planners have been able to receive an overall picture of different wishes and interests, and at the same time the wishes and interests have been made visible for stakeholders. At the same time it has been an opportunity to show the respondents that MSP is not only about their own wishes, but there are many other wishes involved, too.

When all opinions are gathered together, it can be checked whether there are conflicts but also compatibilities, could there be some synergies how some activities could benefit from each other. These discussions were mentioned to take place already in the early phases of the process, so that already in the beginning the issues can be discussed and figured out how to organize them – otherwise the opinions would get louder in the later planning phases. Some mentioned also that each topic is discussed with the right authority, the experts of this particular fields, so that they can have more accurate and reliable answers.

8.2.4 Developing partnerships and shared visions

The interviewees agreed that in the future the role of transboundary cooperation will grow remarkably. The interviewees agreed that there is a shared responsibility when it comes to marine space, environment and securing coherent plans, although until now everyone has created national MSPs. One respondent compared the Baltic Sea to the North Sea and concluded that in the future the North Sea would also need stronger cooperative spirit, similar as the already existing “Baltic Sea spirit”.

Concerning the Wadden Sea the interviewees highlighted that more commitment and political decisions will be needed - in the future it might be even more needed due to the increasing pressures and global changes. On the other hand, the interviewees saw that perhaps due to the Wadden Sea there are not that many spatial planning conflicts in the area, because everyone has similar vision about conserving the area. For example, compared to the rest of the North Sea it was mentioned that planning is harder there, because it's not as clear for what kind of use the area has been designated.

8.3 Integration

This section introduces the interview results from the integration point of view as defined by Soma et al. (2015). The aspects of integration of a) sectoral marine policies and planning systems, b) stakeholder views and governing and c) socio-economic and ecological policy goals are reviewed in the following.

8.3.1 Integration of policies and planning systems

Soma et al (2015) define three elements for integration of integration in marine governance: integration of policy aspects, direction of integration and stages of integration.

Policy aspects & Wadden Sea in MSP

As has been pointed out earlier on, the Wadden Sea region consists of several administrative layers, which makes it a complicated task to define the direction of the integrations – internal, external, horizontal or vertical. Inevitably all these directions are present in the area, and the task of this section is to assess to what extent each direction plays a role, which helps later on to define the stages of the Wadden Sea regionalisation. Nationally there are several levels that have a stake on the Wadden Sea, ranging from the state level to local, and on top of this the sectors are also being heard. When having a look at the Wadden Sea region, this all comes together in a transboundary manner. This section reviews integration of the policy aspects and contents of planning in the research area by approaching the national practices and transboundary actions.

When talking about the Wadden Sea, all interviewees mentioned top-down regulations and policies that are being considered in the national MSP and that formulate the plan contents. Mostly these top-down approach regulations were defined by the EU, such as Natura 2000 areas, Flora-Fauna habitat regulations, but also the cultural heritage aspects defined by UNESCO. Although the policies form a common framework how to approach to certain issues, in the last hand it's up to each country how to translate these into the planning solutions. This way the direction is vertical, and partly external, because the regulations that are on effect are set on another level. The Natura 2000 and FFH, and therefore the EU, define the requirements for environmental protection, and this is taken into account by aiming at as little disturbance as possible. The unique cultural heritage and nature environment set their restrictions, and these are targeted to preserve by policies set by different institutions. The Wadden Sea is part of Natura 2000 network, and this needs to be taken into account.

On national level the countries have their own approaches to use of marine space, the benefits that should be gained, nature protection, and based on the interviews, the direction of this internal integration seems to be vertical as well: the goals and developments are regulated from above, and

the sectors and lower levels are adjusted to this. It was mentioned that the MSP on different levels, if applicable, is based on general spatial planning regulations that show the way to lower planning levels. In the Netherlands Spatial planning act, in Germany Spatial planning act, in Denmark the seas are property of the state as well. This way the lower level regulations and laws need to adapt to the content of the higher-level regulations. In Germany it was mentioned to be relevant, as the coastal planning is not legally binding, but due to the spatial planning regulation also plan on the Wadden Sea area is binding. Another example from Germany is related to the ambitious aims for renewable energy production. Germany is giving up on nuclear energy and therefore one of the solutions is to install more wind energy. This is directing other sectors at the sea very clearly, because wind mills need a sufficient safety zone around them, and not all activities can co-exist with them in the same place.

Another topic is the transboundary level, which is relevant for the Wadden Sea, as it is a transboundary area. In general the transboundary MSP was described to be characterized by the EU regulations, which require the countries to compile coherent MSPs. However, while all interviewees mentioned that this criteria should be fulfilled by the year 2021, the process is still in its infancy, and it can't be said that the transboundary MSP is happening yet to the extent that could be defined as "transboundary MSP". Still, the relevant topics are discussed and planned together with neighbours, such as traffic and other infrastructure projects. The interviewees described that although the planning systems are very similar in neighbouring countries, there are some differences how different things are dealt with, and there might be differences in understanding of the planning, but in general the interviewees saw that the system is working as it is. The plans are done nationally, then shared and discussed with neighbours, and even though there might be differences in workabounds, the process still works and outcomes can be reached.

On top of the EU regulations and other international contracts the interviewees mentioned a few bilateral contracts as well that are utilized in the MSP. Germany and the Netherlands have a state contract due to their common border, upon which the countries haven't come to agreement. They have agreed on special limits, where each of the countries is allowed to plan and allocate activities, without expressing an opinion on where exactly the state border is aligned. This way the countries have found a way to organize the planning without getting into disputes or having disadvantages of not developing the marine areas.

8.3.2 Integration of stakeholder views

Cooperation section presented the multitude of actors cooperating within the MSP processes in the area. Integration of stakeholder views concerns more the outcomes of this participatory process. The

interviewees described that basically everyone is invited to participate and comment, and these views are tried to be integrated in the plans as long as it goes. After all planning is about making compromises so it can't be promised that every opinion can change the plan outcomes, but it's possible if it's relevant and the views can be integrated in a way that is beneficial for the plan. Balancing of the differing interests was mentioned to be the very task of MSP. Integrating different stakeholder views especially across different levels was mentioned to be a difficult task. Cooperating with different vertical and horizontal levels results in a complicated system

“ They (stakeholders) can give us statement, about what they think about our plans. Tell us what they would do differently, how they would do it and make suggestions. Then we look at those and compare the different arguments and statements that come in and figure out a good compromise between all the different sides and their wishes, and come up with a plan and adapt our original idea to better one” (Interviewee 3, Germany)

In general, it was pointed out that the Wadden Sea is just one of the aspects in the MSP processes in the area, more like one of the stakeholders that takes part in the process. It was stated that in the beginning of a planning process the ecological issues are on the same line with economic and social interests, and as the process continues, all these aspects are tried to put together in a sustainable manner. Still, as mentioned earlier, there are policies and regulations that give the Wadden Sea a status as a special area and restricts how the activities can be integrated in the area.

Directly concerning the Wadden Sea there are some uses that are prioritized in the area and these activities regulate which are the other uses that can be located in the area. Nature protection and recreational use were most often mentioned to be the fields that regulate the plan content in the Wadden Sea area. Due to FFH areas and bird areas i.e. the wind energy sector needs to adapt, while it's regulated how many cables are allowed to be laid per a year without causing disturbance to the species. For tourism and recreational use it's important to preserve the view, the seascape, open so that the windmills don't disturb the view. It has been regulated that the windmills need to be built with a certain distance from the coast. Thirdly, energy discussion was mentioned often by the interviewees as an important topic in the area, because North Sea has been an important space for wind energy allocation. Wind energy is also a topic that integrates the sea with the land more closely, because the need for energy production comes from land. The cables are a topic that is relevant for the Wadden Sea point of view, because it's regulated how many cables per a year and where they can be laid down. As the interviewees described, there are specific points where the cables can be connected to the land, and those points have been allocated by considering the vulnerability of the Wadden Sea.

8.3.3 Integration of socio-economic and ecological policy goals

It came clear in the interviews that all countries have the motivation to preserve the Wadden Sea and its ecological values. It was mentioned that there is a shared responsibility for the sustainability, and it's also a question of MSP how to maintain it. The activities and interests across the borders are similar in the area, and hence there is a common vision of the Wadden Sea. Nature protection, Natura 2000, FFH, UNESCO World Heritage and other external regulations and initiatives support the setting of common goals.

It was also stated by the interviewees that because of the Wadden Sea and the common goals to preserve the uniqueness, there is not so much to disagree on, in comparison to the North Sea where there might be more conflicts regarding to integrating different activities, such as energy production and nature protection. Still, some of the respondents were wondering if this situation can stay like it is in the future as well, as the interests and pressures towards marine areas are increasing. or if more political decisions are needed to preserve the Wadden Sea.

9. Discussion

The purpose of this study was to explore the trilateral regionalisation process in the Wadden Sea and how the regionalisation is projected in the MSP practices in the area. In this chapter I discuss and compare the results with previous research.

9.1 Summary of the results

Multidimensional regionalisation in the trilateral Wadden Sea

Spatiality of the Wadden Sea appears multileveled and complex. First, one can define the Wadden Sea region as a trilateral space, where the space is constructed in the interactions between the Wadden Sea states. This space consists of the elements of cooperation, integration and good governance. The cooperation takes place through the defined governance structure, which is divided on several levels and each of these levels aims at connecting different level stakeholders. On the highest level cooperate the ministers, the other levels are meant for encouraging different regional levels, sectors and organisations to participate. Second, the Wadden Sea countries have their own internal structures and approaches that are being developed independently. There are internal collaborations between the municipalities and provinces, they have their own authorities for cooperations and compile own visions. In short, the Wadden Sea is visible not only on the trilateral scale, but also in decision making and management on the national levels.

Many of the activities related to the Wadden Sea cooperation are described as being based on EU legislation, such as the Habitat Directive, the Water Framework and the Bird Directive. The Wadden Sea cooperation is not legally binding, so it does not have the legal instruments to provide protection, for example at the trilateral level, but, given EU directives, it can justify protection measures. The EU also supports cooperation and regional development through various projects.

Another major external factor affecting on the Wadden Sea region is the UNESCO World Heritage, which requires taking specific measures such as monitoring. It is thus a separate structure with the means to steer the practices of the Wadden Sea cooperation. The UNESCO World Heritage nomination has highlighted the value of the Wadden Sea in global scale and raised awareness, but on the other hand the nomination, and other regulations regarding the protection of ecological values have provoked criticism. Some residents in the area and some organizations criticize that the Wadden Sea is too concentrated on nature protection, while other values are less highlighted. To some extent, there have been NIMBY movements against the UNESCO World Heritage because the Nomination has restricted activities, such as fishing in the area.

Thus, it is conceivable that the Wadden Sea region consists of smaller sub-regions which overlap and cross each other. Another question is how well do these different levels and spaces communicate with each other. Even though these regions at their own level cooperate intensively, it is of little use if it remains isolated on its own level without discussing with the other levels. Development is fragmented. In the case of the Wadden Sea, this means a link between the trilateral and the national levels, whereby the visions created at the trilateral level do not remain far removed from decision-making, and the national visions do not create a fragmented governance patchwork.

Factors of regionalisation in the Wadden Sea

Regarding the factors of the Wadden Sea cooperation, the different actors have wide connection networks on their own levels. In the national level it refers to national Wadden Sea cooperation and governance structures, such as organisations of provinces or municipalities, national park governance or other cooperation networks. Usually involved stakeholders include sectors, administrative levels and organisations, but depending on which level the cooperation is organized, participation might be possible for anyone. This is the case, for example, in the Wadden Sea area at local level bodies. Interaction takes place in meetings, workshops and other meetings. In some cases, participation is also possible through online platforms or by sending comments via email or post. The national level is linked to work at trilateral Wadden Sea cooperation through the Wadden Sea cooperation networks, such as the WSF working groups. Representatives from national sectors and organizations can collaborate and act as messengers in both directions. Communication in general is an important part

of cooperation. Communication and transferring information is nowadays easy with the developed telecommunications. Compared to, for example, the time when the Wadden Sea cooperation was started, the solutions were not as fast or easy. Websites, digital tools, email, and social media all ensure efficient communication even across the borders.

Integration is about combining policies, laws and views. Wadden Sea cooperation has produced common visions, common goals and common practices. These are most often in line with EU directives and international regulations that need to be taken into account at national level. Ultimately, implementation will take place at national level. Likewise, there are national laws and practices that primarily dictate how things can be implemented at national level. Although the Wadden Sea countries have the same vision and objectives, each state has its own perspective, which may be slightly differ from the neighbouring countries.

Part of regionalization is made up of the principles of good governance. In the case of the Wadden Sea, both at trilateral and national levels, action seems to be very transparent. Information is available online, policies and visions can be downloaded by anyone, as well as meeting minutes and decisions. The websites also inform about upcoming events.

The spatiality of the Wadden Sea is most often manifested through practices of conservation and associated environmental values. The values largely determine how the area can be operated, where it can be operated and how the area should be developed and protected. The development of trilateral co-operation was inspired by nature conservation ideas, so it can be summarized that the current development of the Wadden Sea is based on a common motivation to preserve the natural values of the area. On the other hand, as revealed in the context of World Heritage, the EBM approach has also been criticized for being too one-sided.

Wadden Sea in the MSP/ ICZM processes

At least in the beginning of the national MSP processes Wadden Sea is on the same line with other aspects related to the planning. One way this is very natural because there are numerous actors and interests that need to be integrated. However, there are a lot of regulations concerning the Wadden Sea that are considered in the planning processes. Also, according to the interviews, the motivation to preserve the Wadden Sea is high.

Based on the interviews, it seemed that not all planners were that well aware of the Wadden Sea cooperation. The interviewees mentioned that they are sure that someone from their organization is participating in the cooperation, but they didn't know more. This applied on the national planning level, when it comes to the state level in Germany the interviewees knew a lot more. This makes

sense, because the ICZM and the coastal zone, and hence the Wadden Sea are more clearly their responsibility. The interviewees from the trilateral Wadden Sea cooperation had similar feelings: according to them it seems that the trilateral tools are not used at their full potential, because on national level the countries are mainly using the national datasets.

When it comes to transboundary MSP, mostly the interviewees didn't feel that they are implementing it to the extent the EU is requiring by 2021. Most of the interviewees concluded that even on the national level MSP is still such a new topic that they need to create their own practices first. On the other hand, this raises the question whether it will be harder to integrate the plans in the later phases, when everyone has created their own plans? It seems that the national interests are more important in this sense. However, the countries are cooperating by consulting each other's plans and by implementing together the projects that require closer cooperation, such as cross border infrastructure projects. Against this background, one could question whether transboundary MSP is needed, if the essential cross-border topics are discussed and everything seems to work. However, concerning that the activities at sea are getting more intense, sea is dynamic environment and there are new risks projected i.e. by the climate change, the importance of transboundary MSP is increasing. The interviewees were also consent about this. The same concerns the trilateral Wadden Sea cooperation: although not all respondents were that familiar with the actual cooperation, all agreed that it's an important task and it should be continued.

9.2. Discussion

In previous research on marine regionalisation the phenomenon has often been approached as a process hailing from one of the EU policies fostering regional development and cooperation (e.g. Soma et al, 2015; Raakjaer, 2012). Does the regionalisation process of the Wadden Sea differ from this? The origin of the Wadden Sea cooperation was a bottom-up initiative that slowly engaged other parties on national level, and finally inspired the trilateral level to cooperate. Common motivation to preserve the ecological and cultural values has been the core binding force of the cooperation, and hence regionalisation, between Denmark, Germany and the Netherlands. On the other hand, EU and UNESCO Cultural Heritage have become important parties by fostering cooperation through regulations and also by giving the framework and requirements on how the region should be maintained and what measurements need to be taken. To conclude, on one hand the regionalisation takes place purely between the Wadden Sea countries, but on the other hand EU and UNESCO are constantly in the background.

This has not been completely unproblematic. As van der Aa et al. (2004) describe, the nomination for UNESCO World Heritage was opposed by local level for the reason that the local level feared that it would diminish their rights to take decisions. They feared also that a higher-level organisation wouldn't have a full understanding of the ecological values in the area, or that there would be too strict restrictions on the uses in the area. In general, the Wadden Sea policies have been criticized by some due to too strong EBM approach. It is true that the physical and ecological factors are rather highlighted in e.g. the visions and strategies both on trilateral and national levels, but at the same time there are social aspects included as well. As the Wadden Sea is a vulnerable ecosystem currently facing new threats, such as the sea level rise, it is understandable that in order to take actions, a lot of technical information is needed. Nevertheless, at the same time the visions and strategies include chapters on e.g. social impacts, communication and education.

Second, the implementation of the EU directives is on responsibility of the countries, but there are no guidelines how they should be implemented. There are differences in the national implementation. However as Slob et al. summarize, the differences are not crucial when it comes to the cooperation.

Thoughts on validity of the research

Validity of methods

My aim was to explore the governance settings and experiences of MSP in the Wadden Sea region and from this point of view qualitative methods were appropriate. By selecting the reviewed documents I strived for a cross-section of different administrative levels, stakeholders and approaches. For sure there would have been many more approaches to cover, but in the context of this study it wouldn't have been possible to cover more. The regional level involves complex multileveled interactions and hence only the most relevant ones from the management point of view were selected. The interviews represent one approach: eventhough numerous fields and stakeholders were mentioned, the interviewees responded from their specific point of view. Interviews are interactive situations taking place in a certain place and certain time, and their results can't be taken as the only truth of the topic.

If in any research, in qualitative research one can't get rid of subjectivity. Researcher has been described as the key of qualitative research, who in the end takes decisions and makes interpretations. Even though remaining objective is the goal, it's possible that to some extent perceptions of the researcher affect the research and the results. I have tried to review from many angles and tried to avoid highlighting only one approach. This applies to both, written documents and the interviews. In

addition to researcher's subjectivity also interviews are interactive settings, where the communication takes place at a certain timepoint and location. The interviewees have their own relationship with the phenomenon, and even though they represented an organisation, it's still possible that the subjective viewpoints appear.

Validity of results

Phenomenon occurs in a specific space that is created by the factors and actors characterizing for the area. To some extent some other marine areas have similarities with the Wadden Sea, and to some extent the results could support development of some other marine area. However, complete re-projecting is rarely meaningful because the marine areas are always attached local conditions, such as industrial structure, location in relation to settlements and other human activities – in other words, to which marine typology does the area belong to?

The results are derived from interviews with specific people in a specific interview situation. Even though the interview script was sent beforehand, it's possible that in the actual interview there have been some miscommunication. There is always a risk that the respondent or the interviewees can't fully express what they mean, and these miscommunications might cumulate in the analysis and interpretation phase of the research. It's also possible that the interviewees haven't thought of something.

The number of my respondents was 7, which might sound like a low number. However, qualitative research does not aim at reaching as broad respondent number as possible, but instead the phenomena is explored thoroughly through precisely defined respondent group. Interviews are usually conducted until the saturation point, which means the point, after which new interviews don't bring up new relevant topics. My approach was defined by the resources and time, and I needed to restrict the respondent group very strictly to one expert group. However, even with such a small number the saturation was visible quite soon. Mainly the responses were similar. The again it can be questioned, if the reason for this was that the respondent group was too narrow. However, one of the aims of this research was to explore the differences and similarities between the different countries. If the backgrounds of the respondents had been too diverse, this would have not been possible.

10. Conclusions

Finally, based on the results, I answer to my research questions that were set in the beginning of this study.

How is the Wadden Sea constructed as a sea region?

- *How has the trilateral cooperation developed? (trilateral aspect)*
- *What are the national perspectives of the Wadden Sea governance? (national aspect)*
- *How does the Wadden Sea relate to the rest of the world? (external aspect)*

The Wadden Sea regionalisation occurs on several scales and mainly through the discourse of nature protection. Relational understanding of space is useful for understanding the relations and discourse producing the trilateral space at the sea-regional scale. Trilateral Wadden Sea consists of trilateral management structure, which creates institutional Wadden Sea space. Trilateral Wadden Sea cooperation engages different administrative levels: national governmental level, different administrative levels and stakeholders. Accordingly, there are opportunities for each of these levels to participate, which enables trilateral cooperation on all levels. This should mean that the cooperation does not remain only as a high level friendship agreement, but actually offers opportunities to tackle something concrete, also for the lower administrative levels and the actual stakeholders. Wadden Sea cooperation consists also of different topics. Vision of the region, identity and goals are defined by the most important topics that have been decided to relate to this development. Moreover, Wadden Sea is not only a sea area, it's described as an interface between the land and the sea, connecting land and sea.

Trilateral Wadden Sea cooperation has already quite long history and despite the politic historical setting that the 1970s set, the Wadden Sea countries manage to create their own space of cooperation. Space is constantly changing and affected by time, and also Wadden Sea cooperation has developed over the time, become more structured and intense. Modern technology and digitalisation has also enabled this: communication is easier and quicker nowadays, information sharing is easier. It makes the cooperation more transparent because information can be presented to stakeholders online and made accessible for everyone.

Trilateral level and the national levels are connected via Wadden Sea cooperation either by direct participation or by taking into account the trilateral cooperation. For example, by scheduling the national meetings after the trilateral meetings allows to deliver the message from the trilateral level and to continue discussion how to implement and solve the matters on the national level. Wadden Sea is present on all layers of Wadden Sea region, and there is interplay between these layers. On national

level it is noted on different administrative levels. It is noted in national policies (a large scope of different topics) but it has also created new governance structures that concentrate on Wadden Sea matters. In general, each Wadden Sea country has internal Wadden Sea governance structures, and each of these reflect the administrative structures of the countries. For instance, in Denmark it's implemented on the municipality level, in the Netherlands with the provinces and municipalities and in Germany within the states. This indicates that the Wadden Sea is included in the governmental structures and hence stated as region, regionalised.

Third, there are international aspects, such as EU regulations, IMO and UNESCO that on one hand set regulations and policies that need to be taken into account in the governance of the Wadden Sea, and hence they affect the space in the area. On the other hand some of these regulations considering the Wadden Sea have their roots in the values of the area itself.

How is the Wadden Sea regionalisation projected in MSP developments of Denmark, Germany and the Netherlands?

- *What is the relationship between the national MSP strategies and the trilateral strategy?*
- *How does the Wadden Sea affect the national MSP processes?*
- *What kind of challenges does the Wadden Sea project in the MSP processes in the area?*

Based on the results, in national MSP strategies the Wadden Sea effects on MSP mainly by it's ecological values and landscape values. As the intensity of utilization of the area is high, there are a lot of activities that need to be compromised in the planning process. The activities are regulated by designating specific areas where certain activities can or cannot take place and timely the bird nesting times are taken into account.

MSP in the area is implemented as national plans. Forms of cross-border MSP in the area include mainly participation in the plan consultations, changing information, participating on transboundary meetings and EU MSP Platform. There is cooperation on bilateral and trilateral levels, but also in the wider North Sea context. The potential for cross-border cooperation on MSP within the Wadden Sea cooperation mainly takes place in the ICZM Working group of the WSF and with the Wadden Sea Region MSP tool. However, it was stated that regarding to the MSP cooperation and the Wadden Sea cooperation in general, the potential is not utilized that much on the national level. On national level,

the planners were not that well aware or personally involved in the Wadden Sea cooperation. Values of the Wadden Sea, how these affect the planning were well known, as well as the long tradition of the cooperation, and that someone from the planning organisation is represented in the cooperation.

The Wadden Sea was seen as a harmonizing factor in the cross-border MSP cooperation between Denmark, Germany and the Netherlands. Due to the mutual motivation to preserve the ecological values in the area it was perceived as an area with less potential planning conflicts than e.g. in the rest of the North Sea where the designated use is not as clear. Challenges perceived by the planners were mainly related to intensification of the marine uses in the area, and future threats, such as the climate change. In the future sea level rise and extreme weather conditions need to be taken into account in the planning, and compromising all those with the ecological factors, while at the same time maintaining the environment safe for people is a challenging task.

Further research topics

My research is situated in the European context, and so are numerous other previously implemented studies. In the European context the EU has a strong role in spatial policy, regionalisation and marine spatial planning. It seems that the European approach is to some extent dominating the research on marine regionalisation and MSP. That's natural development, considering that due to the MSP framework by the EU the volume of MSPs in the European waters has increased within a few years drastically. Therefore, I see exploring marine regionalisation in the global context as an interesting opportunity. A comparative study of case example from different places around the world would be beneficial in order to understand better and to learn from each other.

Zooming in to the other direction, it would be interesting to learn more of the local level and MSP. As was pointed out in this study, the municipalities rarely have a big role in implementing a marine spatial plan. Still, e.g. the coastal municipalities, and their inhabitants, are affected by the plan.

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In Helsinki, 5.12.2019

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13. Appendix

Appendix 1. Interview questions

General questions

- Please describe shortly the main tasks of your organization regarding marine governance
 - How do you see the importance of marine spatial planning?
 - How would you describe seas as “areas”?
 - How would you describe the Wadden Sea as “an area”?
-
1. Which are the fields/ stakeholders, with whom you are cooperating the most concerning the marine spatial planning (related to the Wadden Sea)?
 2. Are there certain fields/ stakeholders with whom you think it would be beneficial to cooperate more?
 3. Please describe shortly, how is the cooperation organized in practise?
 4. What are your experiences about information sharing in the marine spatial planning processes (related to the Wadden Sea)?
 5. Is the available information versatile enough or are there i.e. particular fields or regional levels that are more highlighted than the others?
 6. Is the available information utilized in the marine spatial planning processes?
 7. How has the integration of land-use planning and the coastal zone planning been considered in the marine spatial planning process of your level? - How does the Wadden Sea relate to this?
 8. How has the integration of the coastal zone and off-shore areas been considered in the marine spatial planning process of your level? - How does the Wadden Sea relate to this?
 9. How have the marine spatial planning processes of the neighbouring countries been considered in the marine spatial planning process of your level?
 10. What are the biggest challenges of the trilateral cooperation related to marine spatial planning and the Wadden Sea?
 11. What are the biggest achievements of the trilateral cooperation related to MSP?
 12. How do you see the future of marine spatial planning? (In the southeast North Sea/ In general)